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THE BENEFITS TRICKLED UP: THE POLITICAL GEOGRAPHY OF WATER PROVISION IN PARIS, ONTARIO, 1882-1924

By

JOHN SOLOMON HAGOPIAN

Bachelor of Arts, University of Ottawa, 1981
Bachelor of Laws, University of Western Ontario, 1985

THESIS

Submitted to the Department of Geography
in partial fulfillment of the requirements
for the Master of Arts degree
Wilfrid Laurier University
1992

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ISBN 0-315-78140-8

Canada

ABSTRACT

The social and political factors which affected nineteenth-century waterworks development have been relatively well researched in the United States. The few Canadian studies have found inequities in the systems of water provision. Using Paris, Ontario as a case study, an attempt is made to fill this research gap in Canada.

The research centres on the identification of the social classes which paid for the Paris waterworks and which received the benefits. The spatial distribution of these social classes is determined and then compared to the spatial pattern of waterworks development. A similar comparison is done between the functional zonation of the town and the spatial pattern of waterworks in order to test an hypothesized emphasis on the needs of the owners of the means of production. The correlations found are explained in the course of an examination of nineteenth-century laws concerning council membership and municipal voting. The legislative bias in favour of the owners of capital is anticipated by both Marxism and critical theory.

The primary data source used were the local newspapers of the day, which in many instances propagated much of the pro-development misinformation. In addition to the analysis of events which occurred after the completion of the waterworks system, there is a detailed examination of the statements and actions of the proponents and opponents of the system before the undertaking was authorized by council and by the electors. The proponents are prominent industrialists and merchants whose coordinated development efforts are generally well-received by municipal politicians and newspaper editors. Support is thus found for Habermas' theories concerning the legitimizing role of the state, and the systematic distortion of communication which is characteristic of capitalism.

ACKNOWLEDGEMENTS

For their assistance, I thank D.A. Smith, Dr. Richard Harris, Doreen Dassen, and the staffs at the Paris Municipal Office, the Paris Public Utilities Commission, the Hamilton Museum of Steam and Technology, the Archives of Ontario, the National Archives of Canada, and the National Library of Canada. Helpful suggestions were also provided by the members of my thesis panel, Dr. Herb Whitney, Dr. C. Grant Head, and my supervisor, Dr. Bob Sharpe.

As no government body would contribute a cent to this class-based research, I am grateful to my parents for their understanding and for their financial contributions. Without them, this thesis would not have been possible.

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To D.A. Smith, historian

In point of derivation, the office of government is a predatory function, pertaining integrally to the archaic leisure-class scheme of life. It is an exercise of control and coercion over the population from which the class draws its sustenance.

Thorstein Veblen
The Theory of the Leisure Class

In fact, if you were to mount to the roof of the Mausoleum Club itself on Plutoria Avenue you could almost see the slums from there. But why should you? And on the other hand, if you never went up on the roof, but only dined inside among the palm-trees, you would never know that the slums existed - which is much better.

Stephen Leacock
Arcadian Adventures with the Idle Rich

[Paris] is divided into the upper town and lower, (Smith's Creek, which here enters the Grand River, separating the two); and the most singular circumstance connected with it is that the water runs from the lower town to the upper town. Not that the water absolutely runs uphill, but the banks in the lower town, on the upper portion of the streams are low, while below the banks rise suddenly to a considerable height.

W.H. Smith
Canada: Past, Present and Future

PREFACE

Since 1978, I have devoted six years of university to the study of geography and six years to the study and practice of law. In that time, I have learned only that university has as little to do with truth as law has to do with justice. Society will receive little salvation from lawyers or professors, and certainly none from law professors. This condition exists because of the financial pressures exerted by the structure of our society, and because of the complacency of those who fill privileged positions. In Marx's terms, one might say that a dialectic exists between a system of privilege and the privileged themselves.

This thesis is an attempt to break the pattern of co-optation which prompts professors and students alike to engage in socially indifferent research. It is unbiased in the sense that I received no money from any public or private organization which sought to be appeased, placated, promoted or defended. It is relevant in the sense that the story described is necessarily a recurring one in capitalist society, as it relates to technological, locational and political issues generally. This thesis is true in the sense that it is based on the premise that Canadian society is, and for a long time has been, class differentiated, and is characterized by class struggles. It is amazing that in some quarters support for this observable fact is still demanded. This thesis is just in the sense that it accepts the notion that all persons are inherently equal, and have a right to equal treatment by, before and under the law. It is not amazing that in most quarters this notion is rejected, as propaganda of the Animal Farm variety has distorted the definition of equality irreparably in our society. If in the future a condition of equality is to exist, a new word will have to be invented to describe it.

This thesis is dedicated to D.A. Smith, a Paris historian who began teaching at Paris High School in 1929. In the foreword to his essay on the 1949 strike at Penmans mill in Paris, he notes that as of 1930, Canadian historians had "virtually ignored" the working class and the conditions in which they lived. He writes:

> As a result, I felt that there was a sort of conspiracy to silence, and that most of the middle class looked upon the workers as being non-citizens existing apart from the nation, like slaves in the American South before the Civil War.

I think that the conspiracy of silence continues today, and that the working class is still not recognized as part of the citizenry. Following the lead of D.A. Smith, I hope that this thesis contributes to the small body of class-based scholarship in Canada, and that it may in some way foster the empowerment of the masses.

CHAPTER 1

INTRODUCTION

1. THE SUBSTANCE OF THIS THESIS

The study of urban service provision has been recognized as a useful way of examining broader questions about society. Waterworks systems were the first major urban infrastructure to be built in most North American municipalities, preceding sewers, hydro-electric networks, paved roads, and concrete curbs and sidewalks. Yet surprisingly little research on nineteenth-century Canadian urbanism has considered the political context of waterworks developments or their social impact. The few Canadian studies which have dealt in a relatively comprehensive manner with waterworks developments have focused on major urban centres. All of these studies have found some degree of social inequity, or governmental or corporate irresponsibility, in the provision of waterworks service. No attempt has been made in Canada to apply a general theoretical framework to a detailed empirical study of waterworks development.

This thesis is an attempt to fill this research gap. Paris, Ontario was chosen as the locality for this study for several reasons. It was one of the first towns in Canada to install a publicly-financed waterworks system for domestic use. It has an active historical society which has been supportive of the authors of several local histories and a scholarly text. Paris has also preserved enough of its original documentation from the relevant time period to provide a solid basis for this study.

The time period of this study begins in 1882, the year that the issue of waterworks was debated, accepted, and construction began. The study period ends in 1924, as that is the last

year for which accurate fire insurance maps of the waterworks system in the town are available. Limited reference is made to a few pertinent events which occurred before and after this period.

There are two major themes in this thesis. The first is the centrality of geographic issues in the application of a general theoretical framework. The framework used is one which relates the social geography and the functional zonation of the town of Paris to the historical pattern of water provision, and the terms and conditions of that provision. The theory of Marxism is used to inform this framework with a social and political basis with which to interpret the resulting spatially coincident patterns. The Marxist preoccupation with the means of production implies that spatial areas which perform commercial and industrial functions would receive more favourable waterworks service. The Marxist notions of class differentiation and class struggle imply that the residential areas of the affluent would be similarly favoured. In both cases, the spatial pattern of propertied interests - the interests of capital - is hypothesized as influencing, if not determining, waterworks development patterns.

The second major theme relates to the examination of the ideologies and rhetoric which were used to justify, and facilitate the acceptance of, the values and wishes of those with competing interests. The Marxist notion of class struggle is again relevant here, as an attempt is made to relate this empirical data to the general theory. The success of the self-serving objectives of the wealthy depends upon that class's ability to hide its agenda and, to the extent it is revealed, to legitimate that agenda to members of other social classes.

An analysis of the efforts of the wealthy to obscure reality is supported in theory by the critical theorist Jurgen Habermas' writings on systematically distorted communication. His legitimation theory also informs an analysis of the efforts of the wealthy to justify the perceived injustice of the decisions which result from a marriage of the economic and political elite.

In Paris in 1882, the dominant legitimation argument used by the elite to justify their demands for an initial system of waterworks was an argument best described as the "trickle-down" theory. By this theory, the benefits received by the wealthy, in the form of better service

at a subsidized cost, would flow through to the less affluent in the form of employment. In this way, the citizens of the town would all prosper together as one spatial class, not as distinct, opposed social classes. The objective of this thesis is to determine why and how it was that the benefits instead trickled up.

2. THE METHOD OF THIS THESIS

Both quantitative and qualitative methods are used in this thesis. The social geography of the town was determined on the basis of the dollar values given for each property in the Paris tax assessment records for 1881 (the year before waterworks construction had begun). Much attention was also paid to statistical records pertaining to the finances of the Town of Paris and its waterworks department. From this data, the relative contributions of the various social classes to the cost of the waterworks system was determined.

The bulk of the data in this thesis, though, is the rich distillate from a myriad of qualitative sources. Numerous municipal documents, bylaws, and minute books from various committees, commissions and the town council recorded significant events in the urban and waterworks chronology. Copies of local newspapers provided detailed descriptions of these events. Maps of various phenomena, including the Charles C. Goad fire insurance maps and registered plans of subdivision, were indispensable. So too were local history texts published in 1883, 1920, 1956, and 1982, together with an academic text published in 1990.

However, the most obvious method used in this thesis is the use of Paris as a case in which to explore the accuracy of a theory. In the words of Clyde Mitchell, a case study is "a detailed examination of an event (or series of related events), which the analyst believes exhibits (or exhibit) the operation of some identified general theoretical principle."[1]

An obvious danger is that such a theoretical principle can bias the perception of the researcher and distort the reality of the case. The researcher, while in the field, must compile his data "prior to any deliberate analysis or selection for presentation in some analysis."[2] The

researcher seeks to understand the totality of his study groups, "to preserve the unitary character of the social object being studied."[3] This is less selective than the "'survey' type of analysis in which the person is replaced by the trait as the unit of analysis."[4]

The researcher's data should describe who the players in his study group were, their actions, and their reactions to the events which occurred.[5] This will require generalization. So as to ensure that errors are not made at this point, "It is incumbent on the observer to provide the readers with a minimal account of the context to enable them to judge for themselves the validity of treating other things as equal in that instance."[6]

A sharp empirical focus has also been demanded by those who insist that urban historians "devote less attention to ideas, to rhetoric and to institutional changes and [instead to] concentrate upon what actually went on in cities."[7] This view is echoed by Christopher Norris, who finds implicit in the work of E.P. Thompson the principle "that historical episodes make sense . . . for those who have lived through them and worked collectively to achieve some political end."[8] It follows, then, that historians should "give due weight to the words, motives and actions of those involved, rather than adopt the kind of high-handed attitude that claims an a priori privileged perspective above all mere vicissitudes of time and place."[9]

The choice of the particular case to study is not important. Unlike statistic-based research, the theoretical extrapolations from a case study do not depend "on the typicality or representativeness of the case but upon the cogency of the theoretical reasoning."[10]

The use of the case study method seems to pre-suppose the adoption of a structural mindset. It has been argued that "all cases . . . are located within some wider context which in turn imposes constraints on the actions of the protagonists in the case study."[11] Gilbert Stelter approves of "the study of individual community."[12] He suggests the combination of local history with wider "universal interests" in order to highlight the comparative aspects of the topic being studied.[13] Alan Artibise has written that most Canadian urban histories have been "almost exclusively descriptive in nature,"[14] and that they lack "any attempt at a systematic, analytic

approach."[15] This renders "the goal of a comparative history and synthesis impossible."[16] M. Gluckman states, "Clearly one good case can illuminate the working of a social system in a way that a series of morphological statements cannot achieve."[17]

Various authors have expressed opinions concerning the approaches which should be used in studies of urban historical geography. Stelter states that the study of urban settlements with an emphasis on the "city building process" was begun by Lewis Mumford, Patrick Geddes and Sam Bass Warner.[18] James Lemon believes that there are today two approaches within this field of study: the ecological/behavioural approach, exemplified by Peter Goheen's Victorian Toronto; and the political/planning approach, exemplified by Artibise's Winnipeg: A Social History of Urban Growth.[19] Lemon prefers the political/planning approach because of its concern with the distribution of power among various urban groups. It is this approach which is used in this thesis. Lemon states, "We should consider how social values and the very special actions of speculators, developers, innovators, merchants, and politicians formed our cities. Obviously, this will be an interdisciplinary task."[20] Haley Bammon and Ian Davey concur, stating: "Our contention is that the historical geographer must study the political and ideological interrelationships within the original decision-making process if he is to understand the development of the pattern."[21]

Artibise notes that geographers tend to "isolate the purely geographical controls on town growth and to leave aside other dynamic factors."[22] He believes that geographers and other social scientists would benefit "by placing in an historical context the large, complex, and often unintelligible forces that now beset the modern world."[23] This thesis attempts to do this by integrating with spatial factors an analysis of such social forces as class struggle and the reproduction of capital.

In his criticism of the work of Marxist urban geographers, Steven Pinch states that the working class has been falsely depicted as passive and easily manipulated.[24] He suggests that Marxists provide "some notion of the political struggles that lie behind the creation of policies,

state forms, and collective consumption patterns."[25] This thesis attempts to do this by documenting the political context in which waterworks decisions were made. Pinch adds that such studies must involve an historic aspect, as: "Essential for such a task are more detailed empirical studies of past struggles between these diverse groups and, perhaps more important, a focus upon the changing character of these struggles in contemporary societies."[26]

Joel Tarr has suggested that six questions should be asked by those who do research on the construction of municipal infrastructure. Many of these are addressed throughout this thesis:

> What was built and where? Did the private or public sector or some combination of the two provide the service? If public, how would these services be paid for? If private, what were the terms of the franchises? How did they relate to urban development and expansion, and on what basis were they distributed throughout the city? And, what effects did they have on the urban fabric and the quality of life in the city?[27]

To a certain extent, this agenda is consistent with Douglas Porteous' summary of what is involved in the investigation of any urban planning decision:

> Planning critique is not a discrete discipline or a field, but an approach which is strongly interdisciplinary. It is fundamentally political, and can be traced to the three questions posed by Webber in the 1960's in relation to planning decisions - who decides? who pays? who benefits? (Moseley 1980) Planning critique is an approach suitable for historians, geographers, and sociologists as well as architects and planners themselves.[28]

M.J. Moseley, "Rural Geography: from liberal to radical?" Progress in Human Geography 4 (1980): 460-63.

The organization of the data in this thesis is based in part on these three issues. A consideration of the control possessed by decision-makers appears in Chapter 4.2 of this thesis. The arguments voiced before the Paris waterworks system was built concerning who would pay for it are examined in Chapter 4.3. A consideration of who would benefit by it is in Chapter 4.4. Chapter 5 explores the question of who actually benefitted from the system, and Chapter 6 identifies who in fact paid for it.

3. THE IMPORTANCE OF THE STUDY OF WATERWORKS

The study of urban infrastructure such as waterworks is important since it reflects the nature of the society which builds it. Urban economics, politics, history and growth are all closely related to the development of municipal waterworks. David Goldfield states:

> . . . it is instructive to look at government as it ordered urban society through the implementation of urban services. In that way, we not only can see how American cities matured. but we also can confirm the total dominance of economic objectives not only in the use of space, but in the determination of public policy as well.[29]

Jon Teaford believes that the study of urban politics demands that attention be paid to municipal infrastructure:

> In my work . . . public services are essential elements in the study of municipal government, not just dependent variables reflecting the social attitudes or the personal immorality of urban decision makers. Fire and police protection, water supply and garbage collection are the business of city government, and they deserve a central place in the history of urban rule.[30]

In their study of the Toronto waterworks, Elwood Jones and Douglas McCalla state: "Thus, the history of a specific issue such as that of Toronto's water supply permits detailed examination of wider questions about Toronto and about municipal government in nineteenth century Canada."[31] Eugene Moehring states that public works projects "employed thousands of workers and contractors, involved powerful banks and businessmen in the financing of bonds, and helped determine the fortunes of numerous machine and reform politicians."[32]

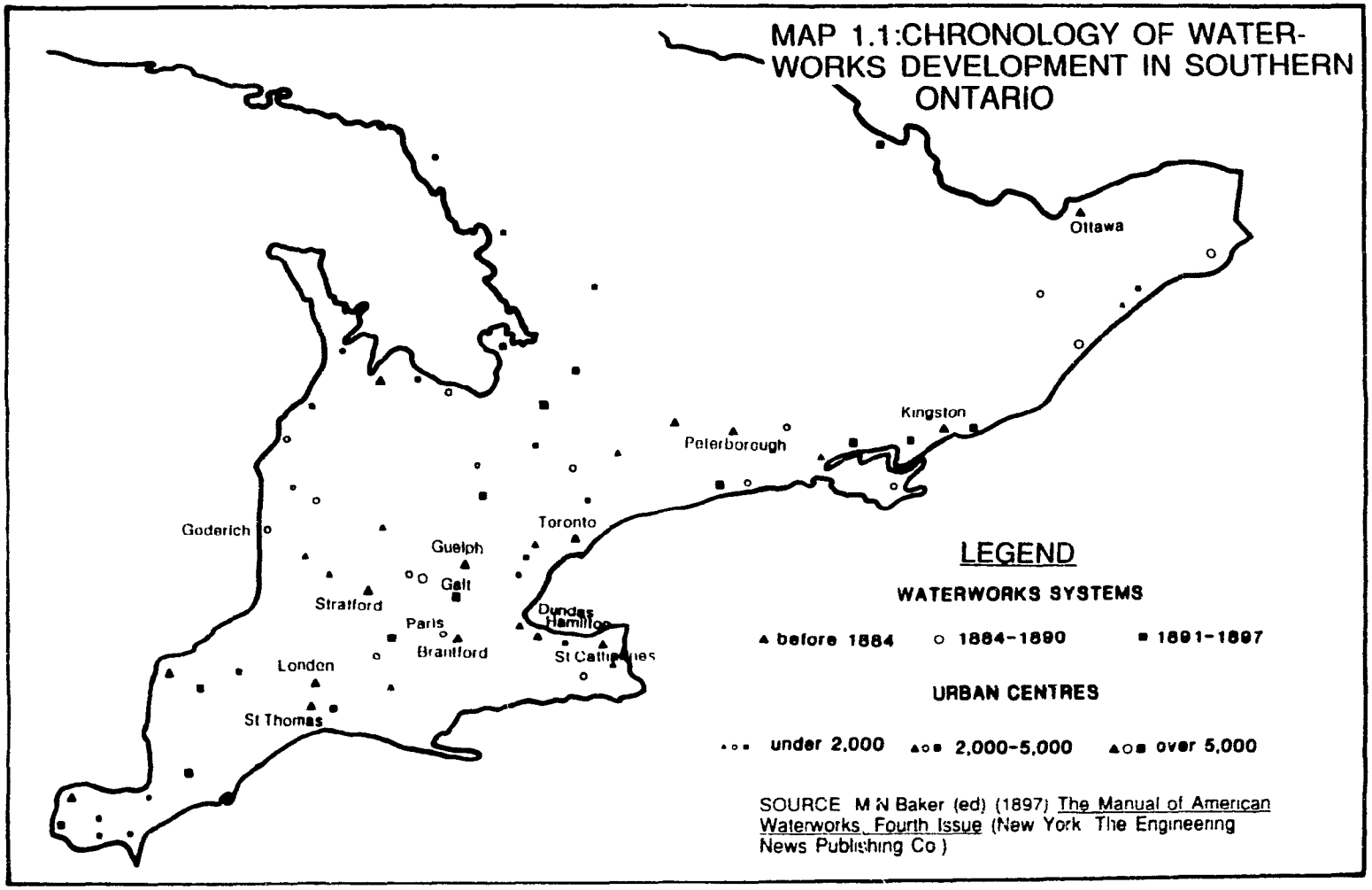
Moehring also asserts that there is "an intimate connection between public works and land values," but that urban historians have not adequately studied the role of the real estate industry.[33] He calls for more research on public works projects, with attention being paid to the role of investors: "More research should centre on the origins and development of these projects and which members of the city's elite pushed them. Most importantly, who benefitted financially and politically from the decision to build?"[34]

4. THE SIGNIFICANCE OF THE 1880s

The 1880s were significant years in terms of municipal infrastructure development. The form of cities was changing due to changes in the mode of production. Joel Tarr and Josef Konvitz state that in the United States, "Cities were in a stage of transition from the older, compact commercial walking city to the new industrial metropolis . . . Within this context of change, important decisions regarding the quantity, type, and location of infrastructure had to be made."[35] Tarr and Konvitz believe that during the time period 1790-1880, cities were "pedestrian," while the period 1880-1920 saw the development of the "networked" city, with a lot of newly-built infrastructure.[36] After 1920, the automobile created the decentralized metropolis.[37]

An industrial boom had also occurred in Canada at this time. C.R. Tindal and S. Nobes Tindal state that "with the onset of the twentieth century Canada was at the end of twenty-five years of industrialization."[38] Robert Morris writes: "Towards the end of the 19th century new forms of industry came to the Canadian countryside. Secondary urbanization brought new industry to such areas as southern Ontario."[39]

In March 1882, the Province of Ontario first passed legislation dealing with municipal waterworks construction,[40] although such systems had been built even before this date. In southern Ontario, for example, Brantford received water from a private waterworks system in 1870, though the municipality purchased this system in 1888.[41] Map 1.1 shows the chronology of waterworks development in southern Ontario. Paris was "one of the first towns of the Province to install a public system of water supply,"[42] although many cities had done so earlier. For example, Hamilton constructed a publicly-financed system in 1859,[43] while in Toronto a private system was completed in 1841.[44] Among towns in Ontario, only Dundas constructed a municipally-financed waterworks system for domestic use (as opposed to solely for fire protection) earlier than Paris.[45]


MAP 1.1:CHRONOLOGY OF WATER-WORKS DEVELOPMENT IN SOUTHERN ONTARIO
Ottawa
Kingston
Peterborough
Toronto
Goderich
Guelph
Galt
Stratford
Paris
Brantford
Dundas
Hamilton
St Catharines
London
St Thomas
LEGEND
WATERWORKS SYSTEMS
▲ before 1884
○ 1884-1890
■ 1891-1897
URBAN CENTRES
under 2,000
2,000-5,000
over 5,000
SOURCE M N Baker (ed) (1897) The Manual of American Waterworks, Fourth Issue (New York The Engineering News Publishing Co)

The 1880s were thus a time of change in southern Ontario. Industrialization was fostering economic change in the workplace, while infrastructure was changing the character of the emerging networked city. It is in this context of change that the implementation of a new, technologically-based service - waterworks - is being examined. It is hypothesized that in spite of seeming change, two characteristics of capitalist organization will persist. First, there will be a correlation between districts of higher social status and areas of superior waterworks service. Second, substantial efforts will be made to legitimize this preferential treatment in the eyes of the poorly-serviced lower classes. This thesis is based on the premise that in its implementation of new technology, a society expresses its fundamental values. Thus the study of this pattern of implementation will reveal these values. What is studied here is more than simply the waterworks system in Paris - the findings reveal the nature of capitalist development generally.

NOTES

1. J. Clyde Mitchell, "Case and Situation Analysis," Sociological Review, n.s., 32, no. 2, (1982): 192.

2. Ibid., 191.

3. Ibid.

4. Ibid., 191-2.

5. Ibid., 204.

6. Ibid., 206.

7. H.V. Nelles and Christopher Armstrong, "The Great Fight for Clean Government," Urban Historical Review, (October 1976): 61; quoted in Elwood Jones and Douglas McCalla, "Toronto's Waterworks 1840-77: Continuity and Change in Toronto Politics," Canadian Historical Review 40, no. 3, (1979): 322.

8. Christopher Norris, Spinoza and the Origins of Modern Critical Theory (Cambridge, MA: Basil Blackwell, 1991), 40.

9. Ibid.

10. Mitchell, "Case and Situation," 207.

11. Ibid., 192.

12. Gilbert A. Stelter, "Recent Trends in Historical Writing on Canadian Urban Development," in Approaches to the Study of Urban Settlement: History, Planning and Geography, Gilbert A. Stelter, Norman Pressman, and James T. Lemon, Occasional Papers, no. 13 (Waterloo: Faculty of Environmental Studies, University of Waterloo, 1974), 4.

13. Ibid.

14. Alan F.J. Artibise, Winnipeg: A Social History of Urban Growth, 1874-1914 (Montreal: McGill-Queens University Press, 1975), 1.

15. Ibid., 2.

16. Ibid.

17. M. Gluckman, "Ethnographic Data in British Social Anthropology," Sociological Review 9 (1961): 9, quoted in Mitchell, "Case and Situation Analysis," 187.

18. Stelter, "Urban Settlement," 3.

19. James T. Lemon, "Study of the Urban Past: Approaches by Geographers," in Approaches to the Study of Urban Settlement: History, Planning and Geography, Gilbert A. Stelter, Norman Pressman, and James T. Lemon, Occasional Papers, no. 13 (Waterloo: Faculty of Environmental Studies, University of Waterloo, 1974), 15.

20. Ibid., 19.

21. Haley P. Bammon and Ian E. Davey, "Ideology and Space in the Toronto Public School System, 1844-1882," Internal Relationships within the Nineteenth-Century City, Discussion Paper, no. 11 (Toronto: Department of Geography, York University, 1975).

22. Artibise, Winnipeg, 3.

23. Ibid.

24. Steven Pinch, Cities and Services: The Geography of Collective Consumption (London: Routledge and Kegan Paul, 1985), 155.

25. Ibid., 154.

26. Ibid., 156.

27. Joel A. Tarr, "Infrastructure and City-Building in the Nineteenth and Twentieth Centuries," in City at the Point, ed. Samuel P. Hays (Pittsburgh: University of Pittsburgh Press, 1989), 214.

28. J. Douglas Porteous, Planned to Death: the annihilation of a place called Howdendyke (Manchester: Manchester University Press, 1989), 224.

29. David R. Goldfield, Urban America (Boston: Houghton Mifflin Co., 1979), 169.

30. Jon C. Teaford, "New Life for an Old Subject: Investigating the Structure of Urban Rule," in American Urbanism: A Historiographical Review, ed. Howard Gillette, Jr. and Zane L. Miller (Westport, CT: Greenwood Press, 1987), 94.

31. Jones and McCalla, "Toronto's Waterworks," 301.

32. Eugene P. Moehring, Public Works and Urban History: Recent Trends and New Directions (Chicago: Public Works Historical Society, 1982), 1.

33. Ibid., 14.

34. Ibid.

35. Joel A. Tarr and Josef W. Konvitz, "Patterns in the Development of Urban Infrastructure," in American Urbanism: A Historiographical Review, ed. Howard Gillette, Jr. and Zane L. Miller (Westport, CT: Greenwood Press, 1987), 207.

36. Ibid., 195.

37. Ibid.

38. C.R. Tindal and S. Nobes Tindal, Local Government in Canada (Toronto: McGraw-Hill Ryerson, 1979), 19.

39. Robert J. Morris, "The Reproduction of Labour and Capital: British and Canadian Cities During Industrialization," Urban History Review 18, no. 1 (June 1989): 54.

40. The Municipal Waterworks Act, 1882, Statutes of Ontario 43 Vic., chapter 25.

41. W.A. McLean, "Sewerage, Waterworks, and Electric Lighting, City of Brantford," supplement to Municipal World 12, no. 1 (January 1902).

42. W.A. McLean, "Waterworks, Electric Lighting and Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902).

43. M.N. Baker, ed., The Manual of American Waterworks, fourth issue (New York: The Engineering News Publishing Co., 1897), 600.

44. Ibid., 607.

45. Ibid., 598.

CHAPTER 2

LITERATURE REVIEW

1. INTRODUCTION

In this chapter, reference will be made to the writings of numerous authorities on theoretical and empirical matters. Section 2 of this chapter defines Marxism and explains its relevance to geography. Using the works of Marxists and of the ideologically similar critical theorists, a discussion of the role of municipal infrastructure in capitalist society ends the section. In Section 3, various aspects of class struggle are explored. Both theoretical and empirical writings are considered in the first two aspects of class struggle. In the first, the use of the concept of local dependence as a means of replacing class struggles with spatial struggles is considered. In the second, the political uses of propaganda and miscommunication are discussed. The last two aspects of class struggle in Section 3 are entirely empirical, as they look at historical change in the structure of municipal government, and at municipal voting laws in Canada. Section 4 focuses on waterworks. After a consideration of the reasons which prompted waterworks construction, this section uses a social class analysis to determine who benefitted from waterworks developments, and who paid for them. This last section is entirely empirical.

2. MARXISM

a. Marxism Defined

Marxism is both an "analytical framework" and a "progressive social agenda."[1] It is based on the tenets of "dialectical materialism, the theory of the class struggle, and the labor

theory of value."[2] Materialism is the belief that the manner in which a society organizes its work and the conditions under which that work occurs is determinative of, or at least of great influence on, all other aspects of that society. In the words of Marx:

> In the social production of their lives, men enter into definite relations that are indispensable and independent of their will, relations of production which correspond to a definite stage of development of their material productive forces. The sum total of these relations of production constitutes the economic structure of society, the real foundation, on which rises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the social, political, and intellectual life process in general. It is not the consciousness of men that determines their social being, but, on the contrary, their social being that determines their consciousness.[3]

"Dialectic" means "viewing reality from the point of view of process and change,"[4] as an "historical evolution."[5] Thus, dialectical materialism entails the study of the change over time in the correlation between the organization of the productive forces of a society and all other aspects of that society. This change over time results from a dialectic relation between the economic structure and the social/legal/political superstructure, though the economic structure is "by far the strongest, most primeval, most decisive."[6]

"Class struggle" describes the situation where the organization of production results in the stratification of society into different classes, the members of which assert the interests of their class against opposing classes. In the words of Marx:

> Economic conditions first transformed the mass of the people of the country into workers. The combination of capital has created for this mass a common situation, common interests. This mass is thus already a class as against capital, but not yet for itself. In the struggle . . . this mass becomes united, and constitutes itself as a class for itself. The interests it defends become the class interests. But the struggle of class against class is a political struggle.[7]

The organization of the workplace results in class struggle because of the exploitation revealed by the labour theory of value. According to this theory, "the value of a commodity, therefore, varies directly as the quantity, and inversely as the productiveness, of the labour incorporated in it."[8]

The owners of the means of production also own the commodities therein produced, which possess a value based on the labour that has gone into them. But the worker is not paid the full value of the labour he has put into the owner's commodities. The difference, referred to as "surplus value" by Marx, accounts for the accrual of wealth, or "capital," in the hands of the owners:

> But what is the growth of productive capital? Growth of the power of accumulated labour over living labour. Growth of the domination of the bourgeoisie over the working class. If wage labour produces the wealth of others that rules over it, the power that is hostile to it, capital, then the means of employment, the means of subsistence, flow back to it from this hostile power, on condition that it makes itself afresh into a part of capital, into the lever which hurls capital anew into an accelerated movement of growth.[9]

b. Marxist Geography

Geography is the study of the spatial variation of the earth's surface. Geographers describe and explain "the differences and similarities between one region and another."[10] In this thesis, various regions of the Town of Paris will be described and explained in terms of the quality of waterworks service each region received between 1882 and 1924. The spatial development of this physical infrastructure did not occur in a spatial vacuum. The waterworks system resulted from the labour of people, and in the context of a socially and spatially stratified society which was organized around the capitalist mode of production.

An epistemology which considers only spatial factors is not acceptable to Marxist geographers, who "attack as 'ideological' any approach which considers space to be an independent variable in the explanation of inequality, since this reveals nothing about the underlying social relations."[11]

Marxism has been used extensively in the discipline of geography.[12] Marxist geographers examine "the dialectical relations between social processes on the one hand and the natural environment and spatial relations on the other."[13] They are "concerned with the ways in which the production of space, place and landscape is implicated in the reproduction of

specific social formations."[14] To Marxist geographers, then, location theory must be explicitly connected "to the geography of capitalist accumulation."[15] Walker states that:

> Urban development patterns and the city form are not the inevitable outcome of natural scarcity, individual consumer desires, transport costs, or 'the technological genie.' They are, rather, deeply etched by rivers of capital investment and carved out by forces of social difference along class, gender and racial lines . . . . Left urban geography might therefore be termed the study of the politics of urban space.[16]

The Marxist epistemology is ideally suited to the geographic case study method. Harvey notes that all case studies indicate that "locality is caught up in universal processes of financial flows, international divisions of labour, and the operations of global financial markets."[17] Marxist geographers can, therefore, use a case in order to study "exactly how the processes of capital circulation bring the unique qualities of human action in given places and times into a framework of universal generality."[18] In various natural and social settings, the capitalist mode of production creates "geographically specific varieties of the social formation which is a localised version of the social process."[19]

In doing their case studies, Marxist geographers must emphasize the use of ideographic, ethnographic, and qualitative data over nomothetic, behaviouralist, and quantitative data. This is so because:

> It is important to realize that the essential relations of the capitalist system are not 'things' which can be directly measured according to the norms of conventional sciences, but are, above all, social relationships which produce outcomes. These outcomes can be observed, but the hidden structures which give rise to these outcomes cannot be directly measured, and cannot be subject to any simple criteria of empirical verification.[20]

Harvey denies that Marxism is too abstract and theoretical to be of value to geographers. He admits that "Marxian abstractions are incapable of empirical confirmation by positivist means,"[21] but denies that Marx created these abstractions:

> Marx does not impose the abstractions. He shows how the processes at work under capitalism give rise to 'concrete abstractions' to which human beings have to respond on a daily basis. Thus do categories like money, profit, daily wage, labour time, the working day, and ultimately value and surplus value arise through an examination of historical materialism. If individuals and the specificities of history and the particularities of geography are abstracted from,

> then it is the processes of capital accumulation that do the abstracting. If anyone objects to the abstractions as inhuman and degrading, it is to capitalism rather than to Marx that complaints should be addressed.[22]

By applying the tenets of Marxism to the topic of municipal infrastructure in general, it is possible to anticipate certain issues which Marxist geographers would be expected to address in their research on municipal waterworks. The tenet of dialectical materialism would imply that waterworks will be built when it becomes necessary for the expansion of the economy. At that point, it will become a political issue; the legislation will implement it; and then it will constitute a new aspects of the culture of that society. In this way, the economy influences, or perhaps determines, the political, legal and social superstructure.

Class struggle will ensue as different groups of people assert their interests in relation to the waterworks issue. Those persons furthest removed from the economic base and the means of production will be least inclined to support the undertaking, or its financing. Those individuals who represent capital will support the project, but will also assert their class interest by trying to spread the financial burden among society as a whole.

The labour theory of value accounts for the desire of the owners of the means of production to support infrastructure development. The value of a commodity is enhanced if productivity, or efficiency, increases. Urban infrastructure generally makes cities into more efficient units of production. Also, the labour theory of value posits that commodities are units of accumulated labour. Thus, waterworks, which reduce the potential loss of buildings and other assets due to fire, can be seen as protecting the interests of the class of owners of fixed capital.

c. Marxism and Critical Theory

In this thesis, the work of both Marxists and critical theorists will be considered together, as if they were a single research framework. These two literatures are being combined because the similarities between their theories and assumptions outweigh their differences. Members of the two camps have written on different aspects of social phenomena

and interaction. The combination of these two frameworks permits an analysis of the case of Paris which is based on a greater number of topical considerations.

It is difficult to define critical theory, as "it does not mean the same thing to all its adherents."[23] The body of literature produced by critical theorists does not form "a single doctrine or unified world view," and, in fact, "sharp differences" exist among critical theorists, "even when they address similar issues."[24] What critical theorists do is identify hypocrisy in modern capitalist society; the "contradiction between the bourgeois order's ideas and reality, between its words and deeds."[25] It is "a set of basic insights and perspectives which undermine existing 'truths' even as they foster the need for a theory of society that remains to be completed."[26] Critical theorists thus seek to both interpret the social order and to transform it."[27]

This dual objective is consistent with Marx's observation that "the philosophers have only interpreted the world, in various ways; the point is to change it."[28] Marx himself called for "a ruthless criticism of everything existing."[29] Similarities between Marxism and critical theory should not be surprising. It was at the Institute for Social Research in Frankfurt, Germany in the 1930s that critical theory was established. In that setting, a self-confessed attachment to Marx was problematic, if not dangerous:

> The term *critical theory* itself was only coined in 1937, after the majority of the Institute's members had already emigrated to the United States following the triumph of Hitler. The concept was initially a type of code which, while differentiating its adherents from prevailing forms of orthodoxy, also tended to veil their radical commitments in an environment that was hostile to anything associated with Marxism.[30]

The major figures in critical theory are Theodor Adorno, Herbert Marcuse, Max Horkheimer, and Jurgen Habermas.[31] Horkheimer, who wrote prolifically between 1930 and his death in the early 1970s, was chronologically the first of these authors. Habermas' work began in the late 1950s and continues today. The earlier writers seem to have been purer Marxists than the later writers. The first leader of the Institute, Carl Grunberg, was "a rather orthodox" Marxist,[32] while Habermas "shows a definite commitment to the reexamination and 'reconstruction' of Marx's historical materialism."[33]

The similarities between Marxism and critical theory are many. David Held notes that critical theorists used many Marxist tenets in their work. These included: the view that our society is "dominated by the capitalist mode of production"; that commodities have both a use value and an exchange value, the latter being "based on abstract labour time"; that society is kept passive by an ideology known as "the fetishism of commodities"; that capitalism creates alienation from the means of production, which leads to class struggle; that capitalism leads to monopoly and non-competition; and that capitalism's need for constant expansion leads to imperialism and war.[34] In sum, Held concludes that the work of critical theorists constitutes "an integral and important part of the Marxist tradition."[35]

Among critical theorists, Habermas is the most serious dissenter from the Marxist camp. He claims that since 1875, the increase of state (political) intervention into the economic system has rendered Marx's structure/superstructure form of analysis obsolete. No longer did economic laws determine social life, because the economic base was now "a function of governmental activity and political conflicts."[36] Thus, "the institutional framework of society was repoliticized."[37]

A Marxist would rebut this argument by stating that governmental activity in capitalist society has always occurred. The state has always intervened as that, according to Marx, is the function of the state:

> The State is the form in which the individuals of a ruling class assert their common interests . . . [It] is nothing more than the form of organization which the bourgeois necessarily adopt. . . for the mutual guarantee of their property and interests.[38]

d. Urban Service Provision in Capitalist Society

In his study of the political economy of urban public service distribution, Richard Rich considers the role which municipal governments play.[39] He asserts that they play the same role that national governments do, and he relies upon critical theory to define this role. He acknowledges that there is much divergence among critical theorists on many points, but states

that all of them agree on two principles concerning the role of the state:

> The state evolved as a result of the need for a sector of society that is nominally independent of the economic sector and can legitimate decisions made by economic institutions and mediate the conflicts those decisions create . . . . Second, there is general agreement that state action serves two broad purposes: to facilitate the accumulation and circulation of capital; and to maintain the social control necessary for production processes and the reproduction of economic classes.[40]

This description neatly reconciles Marx with Habermas. Consistent with Marx, decisions are made by economic institutions, not political ones. Consistent with Habermas, government intervention can occur, but it serves the limited purpose of placating those groups which are adversely affected. This also accommodates Engels, who spoke of a dialectical causation between economics and society, though "the economic movement being by far the strongest"[41] of all societal relations.

In applying these two principles to local government in particular, Rich asserts that the following considerations will emerge as top priorities:

> (1) ensuring that industrial and commercial activities can go on by, for example, providing the necessary infrastructure (transportation nets, utilities, and so forth); and (2) keeping the effects of those human problems not resolved (or exacerbated) by the operation of the market system (crime, poverty, and so on) within acceptable limits so that urban life and commercial activity are possible.[42]

Rich concludes that "this miniature theory of the state . . .provides a theoretical basis for expecting exactly the patterns that have been documented by most previous research on the subject"[43] of urban service provision.

e. <u>The Role of Municipal Infrastructure in Capitalist Society</u>

David Harvey has developed a detailed explanation of the role of urbanization in general, including municipal infrastructure. He asserts that the urban environment which capitalist society builds is made "in its own image, broadly appropriate to the purposes of production and reproduction."[44] This includes an interest in the consumption of those goods produced, as an inability by the workers to purchase them "will disrupt the circulation of commodities."[45] The urban environment provides a reliable form of mass consumption, high in

quantity and steady in flow, which reduces costly disruptions in the circulation of commodities. Consumption is thus managed "in the interests of accumulation."[46] Capital and the state unite in their effort to collectivize consumption in the urban sphere:

> The built environment has a peculiar and important role in all of this. The bundle of resources which comprise it - streets and sidewalks, drains and sewer systems, parks and playgrounds - contain many elements which are collectively consumed. The public provision of these public goods is a 'natural' form of collective consumption, which capital can easily colonize through the agency of the state.[47]

Urbanization has serious implications for our culture. Once created, "the built environment becomes an artifact of human labour which subsequently returns to dominate daily life."[48] Harvey concludes that "the construction of the built environment has to be seen, therefore, in the context of a struggle over a whole way of living and being."[49]

In capitalism, a crisis results when the bourgeoisie have over-accumulated money, and labourers have too little money to consume the excess goods. At this point, money is diverted from the now purposeless production sphere, and channelled into fixed assets, such as machinery, and the "consumption fund," which is the built environment.[50] In Harvey's terms, money is redirected from the "primary circuit of capital" to the "secondary circuit of capital" when there is an excess of both labour and capital in the realm of production.[51]

The secondary circuit's consumption fund requires government institutions to coordinate the construction of the built environment, and the creation of municipal debts to finance it.[52] Such construction takes place during periods of recession, or 'busts' in the economy. When boom times follow, the newly-built infrastructure serves as the basis of the next round of capital accumulation.[53]

Harvey neatly summarizes his theory of urbanization in a manner which fits Rich's summary of the explanation of the role of government held by critical theorists:

> Financial institutions and government manage the urban process to achieve economic growth and economic stability and to diffuse social discontent. If these aims are to be realized, then new modes of consumption and new social wants and needs will have to be produced whether people like it or not. If these new modes of consumption and new social wants and needs do not arise

> spontaneously, in a manner that fits with the overall necessities of capitalist society, then people will have to be forced or cajoled to accept them. The urbanization process achieves this end quite successfully. By structuring and restructuring the choices open to people, by creating distinctive decision environments, the urbanization process forces new kinds of choice independently of spontaneously arising predilections.[54]

Other theorists have slightly differing explanations as to why urban infrastructure is built, but they still use political-economy as the base of their explanations. Richard McCormick states that, in the nineteenth century in the United States, "government's most pervasive role was that of promoting development by distributing resources and privileges to individuals and groups."[55] Charters and tax exemptions were given to favoured individuals who were engaged in public works such as "highways, canals, railways, bridges, and harbors."[56] Joel Tarr concurs, noting that "public works projects have served the purpose of providing political patronage, unemployment relief, or aiding politically sensitive or powerful neighbourhoods, in addition to enriching politically well-connected contractors."[57]

In his study of Toronto, John Weaver quotes an alderman who claimed that from 1885 to 1893, city council was controlled by real estate speculators who favoured the development of municipal infrastructure.[58] Interest groups such as utility and transportation companies were also influential.[59] Business associations "with ambitions to have certain public works undertaken . . . worked to scupper the rules of the game."[60] Of the time period 1790-1880, Tarr and Konvitz have written:

> It is clear that much infrastructure construction and municipal delivery of urban services was related to commerce and development. In this regard, government was serving the same role as it did in providing support for internal improvements; that is, it acted to aid the private economy, especially business interests and real estate developers.[61]

Griffith likens the role of public utilities between 1870-1900 to that of railways before 1870. Each resulted in large "profit potentials," corrupt governments, and "built the commerce of the nation."[62] Kirkland, too, notes the connection between railroads and urban growth, and asserts that such was more than coincidence. As railway construction diminished, the force which was found to boost the economy was "the growth of American cities."[63]

3. ASPECTS OF CLASS STRUGGLE

a. Political and Economic Alliances Within the Space Economy

A number of authors have examined the ways in which various groups of people join together in order to advance their economic interests. These interests and groups are tied to particular localities, and thus have a spatial component. Not all groups are equally dependent on a location for their economic well-being, yet those who have the most to gain by local growth attempt to persuade everyone else that such growth is important to all in the locale. These economic alliances have varying degrees of success, and they assert their interests in many ways.

Cox and Mair have developed an elaborate analysis which emphasizes "local dependence." The business interests situated in a particular locality attempt to eliminate local opposition to their development plans by promoting the conception of local politics "as a competition among 'localities' rather than as a struggle within them."[64] Cox and Mair state that manufacturers can become locally dependent because of their large capital investments within a "geographically limited built environment," and because of their reliance on a local labour market.[65] Land developers, financial institutions and utility companies also have a strong interest in the growth of a community because of their investments.[66]

These locally dependent investors need to control the local government in order to create a more favourable business climate, such as by obtaining tax exemptions and "water and sewer extensions."[67] Local governments are easily persuaded by these investors, since "they depend upon a local taxbase," and since the municipality, like these investors, has made immobile investments of capital in the local built environment in the form of "bridges, highways, schools, fire stations," etc.[68] Such co-opting of local governments by large manufacturers was more pronounced in the nineteenth century, before "the development of national branch-plant structures."[69]

The masses of people can also be locally dependent, as "everyday life is situated."[70] The "growth of home-ownership" and an attachment to one's place of work also make people locally dependent.[71] Investors are "troubled by a class-conscious local environment,"[72] and attempt to co-opt the masses by appealing to their interests.[73] A propaganda campaign begins which attempts "to recast concepts of local community in a form that better suits" the needs of the local business coalition.[74] Among the major speakers are "local corporate leaders, politicians, newspaper editors, or other worthies."[75] The central notion of this campaign is not simply that "our" locality must thrive because of "our" collective financial interest in it. Instead, the notion is perpetuated that "our" locale is inherently superior, more deserving, and "worth defending and safeguarding."[76] The local media filter all news events, and evaluate them as advantageous or disadvantageous for the community.[77] Cox summarizes their arguments as follows:

> Sacrifices will be necessary. In the business coalition's discourse the local community is depicted as existing within a context of other localities, with which it is in a competition upon which its very existence depends. Events within the locality are interpreted with respect to how they influence these crucial relationships with other localities . . . . Events in other places are evaluated: defined either as threatening to the locality . . . or alternatively as beneficial.[78]

Cox and Mair conclude that "local business coalitions and attendant 'booster' ideologies have played a very important role in the United States."[79] They suggest it would be useful to compare their "analysis with studies of defeats of local opposition movements" before 1930, "when both traditional forms of local dependence and class struggle were more evident."[80]

Much of David Harvey's The Urbanization of Capital is in accord with Cox and Mair's views. In that text, he agrees that much of the class struggle is displaced by the "divide and conquer" tactics of a ruling coalition.[81] Local dependence and class alliances are also prominent themes:

> Capital invested in the built environment cannot be moved without being destroyed . . . . The owners of this capital (or of titles to the public and private debt incurred thereon) have an enormous stake in defending their assets and the models of production and consumption which underpin their value. The ownership of such assets and of the debt can spread widely across social

> classes, from the working-class homeowner to the large financial institutions that may hold much of the mortgage and municipal debt. All have a vested interest in the continued prosperity of the urban region and have good reasons to participate in a class alliance to defend their interests. But some factions of capital and labor are more committed by immobile investment than others. Land and property owners (including that faction of the working class that has gained access to homeownership), developers and builders, the local state, and those who hold the mortgages and public debt have much more to gain from forging a local alliance to protect their interests and to ward off the threat of localized devaluations than do transient labourers, itinerant salesmen and peripatetic multinationals.[82]

Like Cox and Mair, Harvey notes that the ruling alliance "engages in community boosterism and strives to create community solidarity behind ideals of social progress and defence of local interests."[83] He emphasizes that this spatial struggle does not render a class-based analysis inapplicable. Instead, local dependence and community rivalry "are a necessary and particular manifestation of the way class relations and accumulation unfold in space."[84]

Unlike Cox and Mair, Harvey believes that local coalitions are not necessarily always in pursuit of local growth:

> Some coalitions may be pro-growth and other anti-growth, and elements of capital and labor can be found on both sides of that divide . . . It can be innovative or defensive, passive or aggressive in its pursuit of social objectives and economic goals . . . The trouble is that there are many ways to be pro-capitalist, while the inner contradictions of capitalism render any attempt to be consistent moot.[85]

A number of empirical studies have explored the question of who has power in municipal government. Carl Harris found that in Birmingham, Alabama between 1871-1921, "the higher the economic rank of a seriously contending group, the better its overall record of political success."[86] Only the upper and middle classes were found to have success in influencing policy, particularly "the top twenty percent of the population."[87] But on occasion, local political issues would cut "across class lines, putting leaders from the same economic ranks against one another, and frequently dividing the economic elite."[88] Harris contrasts his findings with those of Hunter and Dahl for mid-twentieth century American towns.[89] Hunter found that in Atlanta, Georgia, power was held by a "small consensual elite of economic and social notables that worked behind the scenes to control the entire local political process."[90]

Dahl found in New Haven, Connecticut "no consistent pattern of relationships between economic power and political power."[91] The economic elite were "simply one of the many groups out of which individuals sporadically emerge[d] to influence the policies and acts of city officials."[92]

Goldfield found that in nineteenth century American cities, the trend was for local officials to govern "for one particular group in urban society," and to neglect the others.[93] The favoured group was that of local businessmen, and the local government did not regulate business but instead promoted it.[94] This occurred because the majority of people were uninterested in municipal affairs.[95]

Kirkland states that, in nineteenth century American cities, it was common for a political alliance to develop "between the city government and favoured contractors."[96] The contractors benefitted by receiving public works contracts, and the city officials benefitted by receiving votes from the contractors' labourers.[97] Tarr adds that such an alliance also provided local politicians with election funding.[98] Arnold found that in Baltimore in the late 1800s, there was an alliance between "middle-class businessmen and local home owners."[99] They formed neighbourhood associations which put pressure on city council in an effort to advance their "interests over those of other neighbourhoods."[100] Each of these associations "believed that by protecting its local area from inferior land uses while cornering a large share of public and private facilities and services, the neighbourhood would become and remain a stable and desirable middle-class area."[101]

Arnold concludes that "the net result of their efforts was to intensify the growing imbalance of public and private urban goods."[102]

b. <u>The Creation and Control of Community Ideology</u>

In the nineteenth and twentieth centuries, conscious efforts have been made by a ruling elite to turn self-serving myths into the existing ideology of a community. The dual purpose of

this has been to condition the behaviour of society, and also to prevent the lower classes from correctly discerning the nature of societal organization. Propaganda of this kind results in mass control and mass misunderstanding, both of which benefit the ruling status quo.

Community boosterism has played a dominant role in the creation of community ideology. Boyer defines boosterism as "the parallel advancement of urban prosperity and civic pride in one's city."[103] These seemingly innocuous concepts had sharp political consequences. The argument was made that civic improvements required "a definite business point of view,"[104] and that, in the 1890s, there was a need to reorganize the "governmental order of the American city."[105] This reorganization entailed the granting of control to business organizations such as "chambers of commerce, merchants' committees, and commercial clubs."[106] These groups "promised prosperity in return for the acceptance of capitalist organization."[107] In this way, municipal service such as waterworks "were connected with the general ability of a city to attract commerce and to hold a working force."[108] Tarr and Konvitz have written: "City boosters considered waterworks as crucial in the competition of municipalities for population, trade, industry, and emphasized their possession in touting their cities.[109]

Moehring has written that:

> . . . local editors were often big supporters of water systems, sewers, and other projects. Public works were great sources of local pride and often headed the list when booster editors recited the litany of their own's accomplishments.[110]

The role of newspapers as urban boosters is consistent with critical theorists' accounts of the function of mass media. Quoting Karl Bucher, Habermas has written that, after 1750:

> Newspapers changed from mere institutions for the publication of news into bearers and leaders of public opinion - weapons of party politics . . . But for the newspaper publisher it meant that he changed from a vendor of recent news to a dealer in public opinion.[111]

Other critical theorists asserted that mass media and cultural institutions "were organs of mass deception which manipulated individuals into accepting the current organization of society."[112] Boyer has noted that in the late 1890s, "school and supervised playgrounds became essential institutions in the effort to increase the community's power over individual

conduct and discipline."[113] Harvey states that industrialists tried to instill in the working class a work ethic, and the "values of honesty, reliability, respect for authority, obedience to laws and rules, respect for property and contractual agreements, and the like."[114] Harvey believes that Charles Dickens showed in his novel, Hard Times, that schools, churches, and even philanthropists functioned in such a way as to enhance the operation of the industrial system.[115] Churches themselves promote a "spirit of community" which disguises the reality of class conflict.[116]

Habermas asserts that in capitalism, communication is "systematically distorted or blocked" so that "the incompatibility of claims and intentions is not recognized by the participants."[117] This serves to keep conflicts in society latent.[118] Harvey, too, states that the ruling elite establish various systems and institutions which make it difficult for the working class to "identify the enemy."[119]

c. The Reform of Local Government

Control over waterworks systems was affected by changes in the structure of local government. In the 1890s, a movement in municipal politics began which is known as the "reform" movement. This was an attack against democracy, and resulted in the creation of unaccountable bureaucracies which dealt with issues which formerly were resolved by elected officials. Various commissions were created which had as their goal the unimpeded development of urban infrastructure. Reformers claimed that the new regime would be more efficient, as decisions would be based on the rational work of experts rather than on the self-interest of parochial ward representatives. The ward itself was made into a less significant political entity. The reform movement was also touted as an effective way of curtailing widespread municipal corruption. The movement failed to achieve anything it was supposed to, and ultimately served only as a way of consolidating power within privileged classes.

The reform movement began in various places at various times. David Harvey describes measures taken by Baron Hausseman in Paris, France in 1850 which foreshadowed

later developments in North America.[120] Hausseman sought to reconstruct the built environment of Paris, and to this end he assumed total control of the planning commission, and co-opted the appointees who formed the municipal council.[121] Rutherford has written that a Quebec politician was "inspired by Baron Hausseman's achievement in Paris," and hoped to turn Montreal "into the Paris of America."[122] The movement seems to have been strong in the United States by the 1880s, but not so strong in Canada until about 1900.

Tarr states that Pittsburgh established its water commission in 1871.[123] In 1887, all authority over public works was taken away from committees of council and given to the bureaucratic Public Works Department. This change was dictated by legislation passed by the state government, and was intended to facilitate urban growth.[124] Gillette and Miller state that in American cities in the late 1800s, arguments were advanced which supported the granting of power to experts and professionals in the area of municipal planning. Experts and professionals:

> . . . argued that they possessed the ability to reduce the city and its facets to a formulaic prescription, arrived at impartially because it was done scientifically. As a result of their employment of the scientific method, their conclusions were not subject to debate.[125]

Yet Teaford tells us that equity did not result from this scientific professionalism. Instead:

> In virtually every field of municipal endeavour, there was this symbiotic relationship between improved services and a burgeoning professionalism bolstered by private interests eager for the advantage of non-artisan administration.[126]

In terms of municipal infrastructure, the impact of this political shift was significant:

> Thus, the development of municipal services in the late nineteenth century was intimately tied to the emergence of career bureaucrats as a new power bloc in the governing structure and was also linked to the mobilization of new pressure groups outside the formal framework of urban rule.[127]

Referring to "boss politics" and to the urban "political machine," Moehring states that many municipal engineers "owed their position to the machine and acted independently only so far as the boss would permit."[128] He also refers to a study by Giglierano, who found political

partiality on the part of Cincinnati's chief engineer after 1880.[129] Boyer states that the granting of power to experts and professionals in the 1890s produced "a depoliticized public, shut off from understanding the technical and organizational necessities of an urban society."[130]

Rutherford states that in Canada, the reform movement was propagated by "middle-class anglophones residing in the country's larger cities" in the mid-1890s.[131] Weaver states that the movement did not occur in Montreal until 1909, when it had become too expensive for businessmen to bribe municipal politicians.[132] In Toronto, the reformers were members of the upper class,[133] according to Weaver, who adds that by the 1890s municipal governments had "set up boards and commissions designed to place decision-making beyond the trammels of politics."[134] Yet corruption continued, in spite of the "reform" because, as was written in the Toronto Telegram in 1895, "the fault is not with the system but with the people."[135]

Tindal and Nobes-Tindal state that the American reform movement "exerted a strong influence on Canadian reforms at the turn of the century."[136] The movement sought "changes in the structure of local government as a means of eliminating corruption and improving efficiency."[137] Reformers sought to limit "the power and narrow focus of ward-based politicians who failed to understand the importance of municipal reforms and hindered their implementation."[138] But these reforms "really only served to give businessmen a greater hand in municipal affairs."[139]

Among the actual reforms was a shift toward "at-large" elections rather than ward-based elections. Some cities "abolished wards completely."[140] This was done in order to "reduce the influence of foreign and slum residents."[141] In Ontario, the transfer of power from city council to specialized boards and commissions "flourished between 1890 and 1920."[142] Tindal and Nobes Tindal conclude that "the net result of the reforms was a more complex, less accountable local government, more responsible to economy and efficiency than to the voters."[143]

Reformers claimed that politics had no place in local government, as "a city is simply a densely peopled district in need of a specially skilled administration"[144] The fallacy of this thinking is discussed in theoretical terms by Habermas:

> The quasi-autonomous progress of science and technology then appears as an independent variable in which the most important single system variable, namely economic growth, depends. Thus arises a perspective in which the development of the social system *seems* to be determined by the logic of scientific-technical progress. The imminent law of this progress seems to produce objective exigencies, which must be obeyed by any politics oriented toward functional needs. But when this semblance has taken root effectively, then propaganda can refer to the role of technology and science in order to explain and legitimate why in modern societies the process of democratic decision-making about practical problems loses its function and 'must' be replaced by plebiscitary decisions about alternative sets of leaders of administrative personnel . . . What seems to me more important is that it can also become a background ideology that penetrates into the consciousness of the depoliticized mass of the population where it can take on legitimating power.[145]

d. The Political Power of Property Interests

In the last third of the nineteenth century, the right to vote in municipal elections was, in much of Canada, dependent on the ownership of real property.[146] Municipal issues thus tended to be resolved by the affluent, and naturally for the benefit of the affluent:

> . . . the shaping of urban policy from 1890-1920 discloses a more basic division. There were those who had property and those who did not; the latter had little voice in their own affairs, let alone in the more general business of the city. Indeed, important aspects of remodelling municipal government controlling land use or framing health regulations were anything but conducive to democracy and personal liberty. More than that, the curbing of these two ideals was one-sided, being directed against those without property in order to defend or further the interests of those who had.[147]

In his study of Winnipeg from 1874-1914, Artibise found much evidence of the effect of property qualifications. In order to qualify for the office of mayor or alderman, a candidate had to own at least $2,000 worth of property.[148] Not surprisingly, most of the civic officials elected were businessmen,[149] and the working class was under-represented.[150] Voters, too, had to own real property worth over $100, or rent real property worth over $200 in order to vote for candidates.[151] These laws "effectively disenfranchised labour and over-represented the

commercial class."[152] These voting requirements were sufficiently stringent that in 1906, there were only 7,784 qualified voters in Winnipeg, even though the population of the city totalled over 100,000.[153]

In order to vote on municipal money bylaws (which created municipal debt, which was normally used to finance public works), citizens faced even stricter requirements. From 1884-1891, a Winnipeg resident had to own or rent property worth at least $500, although after 1891 this was reduced to $400.[154] Further, owners were allowed to vote in each ward in which they had sufficiently valuable property. This "plural vote" applied to money bylaws, aldermanic contests, and city controller elections, but not to elections for mayor.[155]

Artibise asserts that the right of women to vote, which was granted in 1895 in Winnipeg, also only served the interests of property, not of women. This was because women themselves could not hold public office until 1916.[156] The women's vote was similarly contingent on property ownership. In summary, Artibise concludes:

> It was the property qualification and the plural vote more than anything else that determined the nature and course of municipal politics in Winnipeg . . . [T]he commercial elite...could pursue their growth ethic at public expense and with a minimum of argument.[157]

4. WATERWORKS DEVELOPMENT

a. Reasons for the Construction of Waterworks

With municipal infrastructure generally, political economy can be used to explain the motivation of those who sought such development. Waterworks in particular can also be subject to the same type of analysis. This is true even though each form of municipal infrastructure plays a different role both in the urban environment and in the urban political economy. Most scholars believe that fire protection and public health were the two primary reasons for waterworks development, yet reasons of political economy underlaid both of these considerations.

Before waterworks systems were installed, city residents obtained their household water from "ponds, pumps, and cisterns."[158] Eventually these supplies of water became contaminated, and were believed to be the cause of fatal diseases.[159] Philadelphia's waterworks system was constructed in 1801, just four years after 4,000 residents were killed in a yellow fever epidemic.[160] Sam Bass Warner similarly argues that public health concerns prompted Boston's improved system of waterworks in 1870.[161]

However, overriding this seeming concern for health was a concern by the elite for their continued capital accumulation. Kantor states that "city leaders had to act to contain Philadelphia's public health crisis or risk disorder and decline."[162] Riendeau states that in Toronto in the 1920s, municipal politicians:

> . . . would be concerned with sound corporate management, which invariably appealed to the interests of the propertied classes on whose votes and taxes municipal administrations depended so heavily. Too frequent outbreaks of communicable diseases such as typhoid fever might well discourage business investment and civic growth, a concern that dovetailed conveniently with the emphasis of public health reformers on the health benefits of pure water and effective sanitation measures.[163]

Similarly, a typhoid epidemic hit Winnipeg in 1904, when a serious fire-fighting effort reduced the town's water resources.[164] It became necessary to use water from the Assiniboine River rather than from wells due to the shortage. Previous to the fire, the lower classes in the North Ward used river water regularly and had a higher than normal typhoid rate. During the shortage, the typhoid epidemic "broke out all over the city."[165] Yet the Council's response to this situation was "the construction of a high-pressure system for additional fire protection."[166] This would ensure that the higher class wards of the city would not have to endure another bout of typhoid, but it did nothing to reduce "the disparities that existed between the North End and the rest of the city."[167]

From the Winnipeg experience and from the experience in other locales, fire prevention was also a strong motivating factor for waterworks construction. But again the concern was not with protecting everyone's property, but rather with protecting property owned by the upper

classes. New York decided to spend $13,000,000 on its Croton aqueduct in 1835, the same year that:

> . . . one disastrous fire burned down twenty blocks of valuable buildings, including 529 stores, leaving 2,000 merchants out of business, 5,000-8,000 workers unemployed, and all the insurance companies of the city bankrupted from fire losses.[168]

In his study of Baltimore, Joseph Arnold states that by the 1860s, middle-class homeowners demanded a number of municipal services including adequate fire protection, which were then only available privately to very wealthy families.[169] The middle class then "created a complex system of jointly public and privately financed facilities in order to at least approach the high-quality private world of the rich."[170] The construction of the Pittsburgh waterworks system in 1826 was prompted by petitions to Council in 1822 which:

> . . . maintained that municipal ownership was required to guarantee improved fire protection and to secure lower fire insurance rates; to serve domestic and manufacturing needs; and to meet public health needs. Represented on the petitions were prominent members of the business community who were concerned about the threat of fire, and industrialists and craftsmen who needed clean water in their production processes.[171]

Griffith concurs that the primary function of waterworks was, by 1870, "for fire protection in the first place, and then for domestic use where wells were inadequate."[172] By 1890, "water for domestic use became the ambition of the better informed and more alert cities."[173] Richard Wade documents concerns about fire protection in the 1820s in Cincinnati, St. Louis and Louisville.[174] Artibise notes that in Winnipeg in 1880, "it was not the purity question that precipitated demands for a new system; rather, it was concern over fire protection."[175] Still, it was not until 1900 that Winnipeg constructed a first-rate system of waterworks. Artibise explains that city council was not in a rush because:

> . . . the central portions of the city (wards 2, 3 and 4) - where most of the commercial elite lived and where most of their businesses were located - had adequate domestic supplies of water and at least elementary fire protection. It was in the North End (wards 5 and 6) where almost no water mains were laid, that the most severe problems were experienced. But since these districts included large numbers of foreigners and workingmen, few of whom had the vote or could influence the governing commercial elite in any way, council could afford to take an inflexible stand.[176]

b. Who Benefitted from Waterworks?

The unequal spatial distribution of amenities among a society which lives within a single political unit is not a recent phenomenon. Where there has been class differentiation and exploitation, such unequal distributions may be found. In this sense, arguments related to differences between early, liberal and late phases of capitalism are inconsequential. Mumford nicely links together two societies which were more than 1,700 years apart. In 109 A.D., Rome built the Trajan aqueduct, which brought water into the city where it was distributed by a waterworks system.[177] However, the poor, who lived in crowded tenements, did not receive water or sewage service. In fact, "where the need was the greatest, the mechanical facilities were least."[178] The distribution of amenities, housing densities, and negative externalities was very unequal in Rome, again due to reasons of political economy:

> Rome shows in diagrammatic contrast the relation of an exploiting ruling class to a depressed proletariat and, as Petronius Arbiter well put it in the 'Satyricon,' "The little people come off badly; for the jaws of the upper classes are always keeping carnival."[179]

Mumford notes that technological progress benefitted the wealthy for many years, but changed the conditions of living for the workers only very recently:

> The age of invention and mass production scarcely touched the worker's house or its utilities until the end of the nineteenth century. Iron piping came in; likewise the improved water closet; eventually the gas light and the gas stove, the stationary bathtub with attached water pipes and fixed outlets; a collective water system with running water available for every house, and a collective sewage system. All these improvements slowly became available to the middle and upper economic groups after 1830; within a generation of their introduction, they indeed became middle-class necessities. But at no point during the paleotechnic phase were these improvements made available to the mass of the population. The problem for the builder was to achieve a modicum of decency without these new expensive utilities.[180]

In Paris, France, Napoleon instituted a system of water distribution in 1812. However, there too:

> . . . only the well-to-do districts such as the Faubourg St. Honoré had water laid on. The popular quarters still had to rely upon occasional street fountains, water sellers, and particularly upon water from the Seine.[181]

The theoretical basis for this recurring pattern of unequal distribution is provided by Habermas:

> Because the reproduction of class societies is based on the privileged appropriation of socially produced wealth, all such societies must resolve the problem of distributing the surplus social product inequitably and yet legitimately. They do so by means of structural force, that is, by fixing in a system of observed norms the asymmetrical distribution of legitimate chances to satisfy needs. The factual recognition of such norms does not, of course rest solely on belief in their legitimacy by those affected. It is also based on fear of, and submission to, indirectly threatened sanctions, as well as on simple compliance engendered by the individual's perception of his own powerlessness and the lack of alternatives open to him (that is, by his own fettered imagination).[182]

The upper classes suffered from no such lack of imagination in pursuing their ends. Arnold notes that in Baltimore, various neighbourhood associations began lobbying efforts "outside the normal ward system of partisan politics."[183] These associations were controlled by "middle-class businessmen and local home owners."[184] This movement reflected the spatial interests of residents in their neighbourhood, as by the 1860s Baltimore "began to divide into predominantly wealthy and poor areas."[185] In terms of waterworks, the only social classes deprived of service were "the lower classes in the alleys and courts" who "did without."[186]

While the poor who lived on sidestreets were ignored, the rich did well in terms of waterworks service, regardless of whether they lived in old, central neighbourhoods or new, suburban ones. Boyer states that the primary concern of waterworks planners was that such works "be spatially organized and locationally distributed . . .to meet the needs of all manufacturing and retail sites in the city center."[187] Artibise notes that in Winnipeg at the turn of the century, the city centre, "where most of the commercial elite lived and where most of their businesses were located," were adequately serviced with water.[188] Pittsburgh's system initially serviced "the most central and populous part" of town with large twelve-inch pipes.[189] After the Civil War, though, Pittsburgh's suburban middle-class attracted "a large portion of the city's resources away from the older, industrial districts."[190] This led to a widening of the "gap between the life-styles and quality of life of the middle and working classes."[191] In Pittsburgh

generally, "working class districts had fewer amenities than the more established areas and the new suburbs."[192]

Kleinburg states that in Pittsburgh, working-class dwellings were serviced by smaller pipes than better class dwellings were, and that they had pumps in their yard, not indoor connections.[193] Both of these differences followed from the revenue policy of the water commission, which gave more affluent areas better service.[194] Many working-class dwellings were without indoor plumbing even as late as 1917.[195] Due to the large consumption of water by mills and the Pennsylvania Railroad, many working-class areas were without water service in the summer "from seven in the morning until six at night."[196] Also, the system which serviced the lower-class area was independent of the primary city system, and drew upon contaminated water from the Monongahela River.[197]

Moehring refers to a study by Roger Simon, who found that in Milwaukee, Wisconsin, a German working-class neighbourhood received urban services much later than equally dense middle-class neighbourhoods. Simon accounted for this by referring to the German's preference of retiring their mortgages before they wished to incur the higher tax which services would bring.[198] Moehring himself found that in Manhattan after 1830, water service spread "rather uniformly throughout downtown neighbourhoods," though sewer service was provided for ghetto areas at a much later date than in more affluent areas.[199]

Joel Tarr emphasizes the importance of patronage in explaining the patterns of urban infrastructure development. Particularly in the late 1800s, "political machines with a neighbourhood base . . . often facilitated the expansion of infrastructure and services as a means to solidify their position."[200] The link between pattern and politics is established, with a spatial basis, in this summary statement by Tarr:

> In general, physical improvements were slow in accomplishment and uneven in allocation, because various socioeconomic interests, different neighbourhoods, and political parties and factions fought over their desirability or acquisition.[201]

In his study of Pittsburgh, Tarr found that the city centre and areas inhabited by rich, Protestant businessmen were well-serviced. Wards containing immigrant labourers found that their requests for services were resisted by the old, affluent, established wards.[202] As a result:

> The quality of life in Pittsburgh was often undesirable, especially in the working-class immigrant neighbourhoods. Here polluted water, inadequate sewerage, unpaved streets, and unsanitary housing resulted in extremely high morbidity and mortality rates.[203]

c. Who Paid for Waterworks?

The manner in which funds were raised for both the initial construction of waterworks and the service provided thereafter was not equitable to all social classes. This inequity resulted not only from corruption, but also from the policies and laws which authorities created in regards to waterworks systems. This notion of institutionalized unfairness is not specific to waterworks, but is typical of our society. In comparing his culture to our own, Joseph Brant (1742-1807), leader of the Six Nations Indians who once occupied the present site of Paris, wrote:

> In the government you call civilized, the happiness of the people is constantly sacrificed to the splendor of empires. Hence your codes of criminal and civil law have their origin; hence your dungeons and prisons . . . We have among us no special villains above the control of our laws. Daring wickedness is here never suffered to triumph over helpless innocence. The estates of widows and orphans are never devoured by enterprising sharpers. In a word, we have no robbery under colour of law.[204]

Tarr notes that in Pittsburgh in the late 1800s, there existed a system of bribes and kickbacks between municipal politicians, merchants, and investors. There, corruption "was integral to the city-building process, but it was organized rather than unorganized corruption."[205] Other authors have also found evidence of corruption in the creation of waterworks systems.[206] Corruption is an unnecessary cost which usually benefits only higher ranking members of the political and economic spheres, but is paid by citizens of all social classes, and is therefore inequitable.

Inequities also resulted even when violations of the law did not occur. Most waterworks systems were municipally owned, not privately owned. In Ontario in 1891, only 14 of 58 waterworks systems in existence were privately owned, and they served "probably not 15%" of the total population which had water service.[207] This means that taxpayers as a whole had to raise the huge sums of money required to construct the works, had to bear the burden of the debt, and had to assume the risks of the system being a technical or financial failure. In the words of Harvey, "A ruling coalition in effect speculates on the production of the preconditions for accumulation; it collectivizes risks through finance capital and the state."[208]

Yet the benefits of ownership did not accrue to the public at large, as the works, after being constructed, were managed by unaccountable, bureaucratic, pro-business commissions. In this sense, during the glory days of capitalism at the turn of the century, the proletariat were forced to be rugged individualists, while the bourgeoisie were becoming corporate welfare bums. In the words of Weaver, "It was socialism for businessmen and free enterprise for workingmen."[209]

Private water companies were more common in the United States than in Ontario, but most of them were in smaller cities.[210] Among the fifty largest American cities, private water systems existed in only nine of them.[211] In neither setting did this represent a victory by socialism over capitalist investment. Businessmen themselves encouraged public ownership[212] because, unlike railways, gas and electric utilities, waterworks were "necessary but not profitable ventures."[213] Artibise notes that in Winnipeg in 1897, the Board of Trade strongly supported the expenditures of $700,000 by the municipality for a waterworks system, even though a private system was currently in use. Council then also decided to buy the private system, at a price that some city taxpayers thought was "too high."[214] (In 1873, the City of Toronto paid $220,000 for a private system valued at $186,320.)[215]

Waterworks were very expensive to construct. They were "ordinarily the most expensive capital project undertaken by nineteenth-century American cities."[216] The

TABLE 2.1

WATERWORKS SYSTEMS IN THE UNITED STATES, 1800-1920

Year	Total Number of Waterworks Systems	Number of Systems Publicly Owned	Number of Systems Privately Owned
1800	5		
1850	69		
1860	136	57	79
1875	535		
1880	598	293	305
1885	1,037		
1889	1,960	818	1,142
1890	1,878		
1920	9,850		

Sources: Joel A. Tarr and Josef W. Konvitz, "Patterns in the Development of the Urban Infrastructure," in American Urbanism: A Historiographical Review, ed. Howard Gillette, Jr. and Zane L. Miller (Westport, CT: Greenwood Press, 1987), 199-203; and A.H. Sinclair, "Municipal Monopolies and Their Management," in Saving the Canadian City: The First Phase, 1880-1920, ed. Paul Rutherford (Toronto: The University of Toronto Press, 1974), 7.

TABLE 2.2

WATERWORKS SYSTEMS IN CANADA, 1850-1891

Year	Total Number of Waterworks Systems	Number of Systems Publicly Owned	Number of Systems Privately Owned
1850	6		
1860	9		
1870	10		
1875	20		
1880	29		
1885	46		
1889	83	48	25
1891	100 (approx.)		

Sources: A.H. Sinclair, "Municipal Monopolies and Their Management," in Saving the Canadian City: The First Phase, 1880-1920, ed. Paul Rutherford (Toronto: The University of Toronto Press, 1974), 7; and Willis Chipman, "Public Water Supplies in the Province of Ontario," Canadian Architect and Builder (October 1891).

construction of the Pittsburgh waterworks system "constituted 40 percent of all municipal spending from 1827-1833."[217] By 1905, more than $1,000,000,000 had been spent on municipal waterworks in the U.S.A.[218] When Paris, Ontario decided to spend $30,000 on its waterworks system in 1882, the existing debt was only $3,697.[219]

The money used to construct waterworks was primarily obtained by municipal borrowing.[220] This was true of Hamilton, Ontario in 1856, which subsequently went bankrupt in 1862.[221] It was also true of Pittsburgh.[222] Debt was so central to the financing scheme of waterworks systems from 1880-1920 that such systems could not have been built without "the growth of investment banking and the development of a national bond market."[223] It was taxpayers as a whole who were responsible for repaying these bonds, since waterworks were municipally owned.

Private water companies provided poor service, largely because of their desire for "maximum profits."[224] In New York in 1799, The Manhattan Company provided "notoriously unreliable and insufficient water service . . . The company refused to invest sufficiently to provide adequate water for the growing city.[225] In Toronto in the mid-1800s, the private water company "only occasionally and grudgingly" admitted to having provided inadequate service, even in the face of complaints that they had for "so long supplied filthy water to the citizens."[226] Tarr states that:

> The large capital requirements of the systems and frequent inadequacies of the private companies often resulted in a preference for public ownership. A number of cities that began with private water companies, such as New York and Chicago, shifted to public ownership . . . [227]

Goldfield states that in local government "the business community discovered a willing ally with greater resources and credit than they could muster individually or in their private groups."[228] Municipal politicians participated in this way because of "their genuine belief that what benefitted business benefitted all and that government, as representative of all, should and could finance the project."[229] This confusion of business interests with politics was understandable: "Indeed, it was hard to tell where the private sector ended and the public

sector began. The participants in both business and public life were the same."[230]

In most cases, the municipality provided, at its expense, the waterworks system and street mains. It did not pay for the cost of piping and hardware laid on privately owned property to connect with a building.[231] Subscribers for water would arrange their own connections and then pay an annual fee for water service. In 1890, for example, water cost $15 annually in Chicago and New York, while the suburbs cost as much as $40.[232] Many town residents could not afford water service, or chose not to use it. This was the case in Philadelphia in the 1840s.[233] It was also the case in Hamilton, Ontario in the 1860s, where:

> Only 100 houses had contracted to take the water . . . The water commissioners subsequently decided to follow the example of New York, Boston, Quebec and Montreal and levy the water rate on all property in front of the pipes, regardless of their actually taking water. This would result in its greater use . . . [234]

In Toronto in 1856, thirteen years after waterworks construction, "only one-ninth of all houses were connected," and "even in established areas most owners had chosen not to be connected."[235] In municipalities which implemented the policy of charging the cost of the street main to abutting property owners[236] (even to those who did not have water service),[237] a pattern developed whereby ". . . wealthy areas with a high proportion of homeowners benefitted first, while working-class sections having largely tenants were slow to receive service."[238]

This was the case in Pittsburgh, where "the city treasury (the taxpayers as a whole) paid the operating and maintenance expenses," while abutting property owners paid for the cost of the capital improvement to their street.[239] Areas with many rental premises did not receive many city services since the tenants "were reluctant to have the costs passed on to them in the form of higher rents."[240] Nonetheless, Hamilton's Water Commission tried to gather support for waterworks in 1857 by telling landlords that the installation of a water service would justify a rent increase that was greater than the costs incurred by the landlord doing so.[241]

The system of payment based on a flat annual rate created an inequity between those who had indoor water service and those who had only an outdoor spigot. In Pittsburgh in 1879,

no domestic water meters were in use. Consequently, those with indoor plumbing used copious amounts of water and improved their personal hygiene with daily baths.[242] But for the working class, it was necessary to carry into the house whatever water was to be used. Their consumption was therefore much less.[243] A study in 1895 found that the usage of water meters resulted in almost a 50 percent reduction in water consumption.[244]

Had waterworks been financed completely by those who received water service, and had all services been equal, then there would have been equity in waterworks financing. But "a complex system of jointly public and privately financed" waterworks served the interest of "the rising middle classes" who sought to approximate the lifestyles of the rich.[245] The force of the state was used to spread the cost of waterworks development over a large population, users and non-users of water alike. Jones and McCalla conclude that "the issue can ultimately be seen as one to compel people to pay for and to use what was seen increasingly, by some, as a necessity."[246]

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CHAPTER 3

THE HISTORY AND GEOGRAPHY OF PARIS

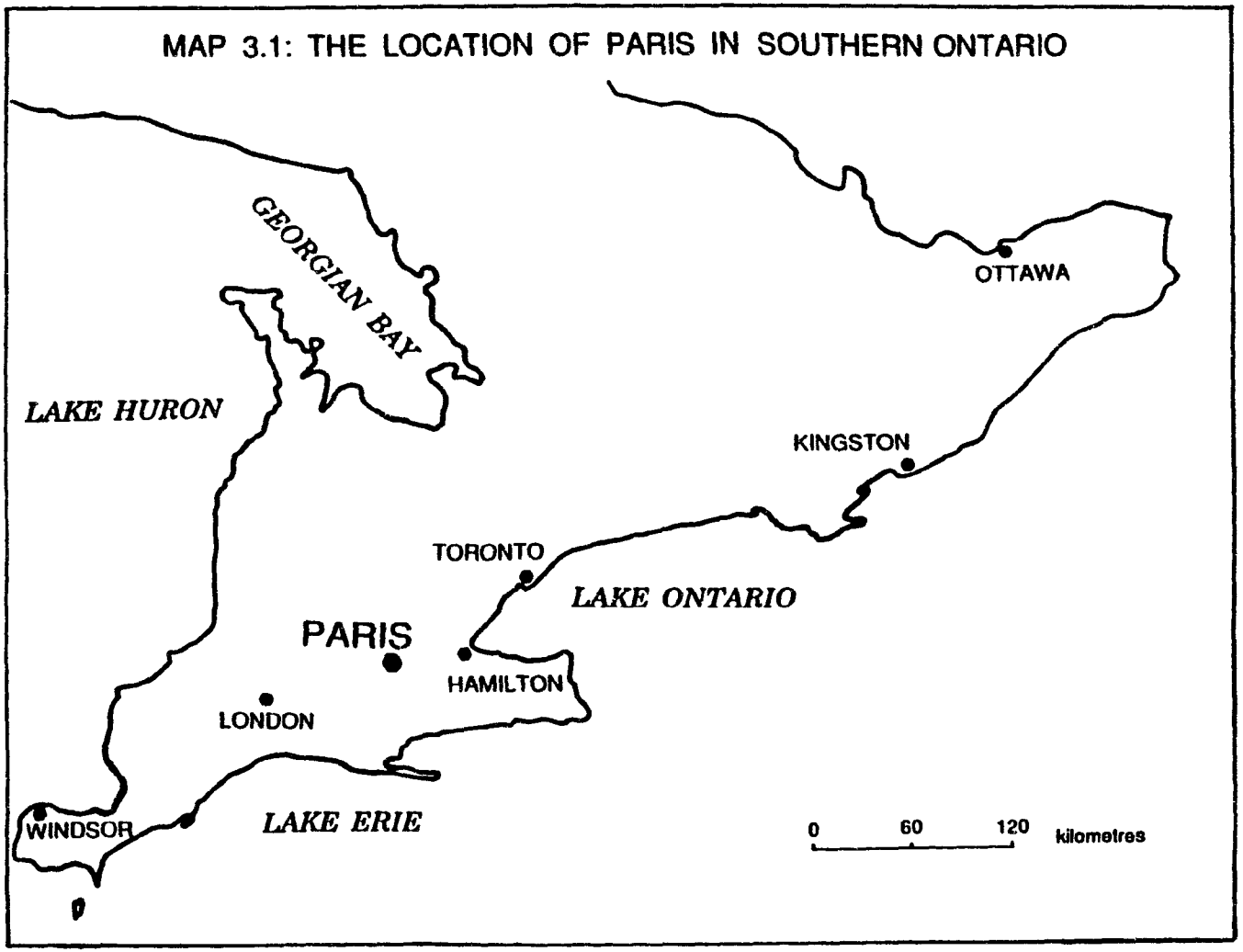
1. THE SETTING OF PARIS

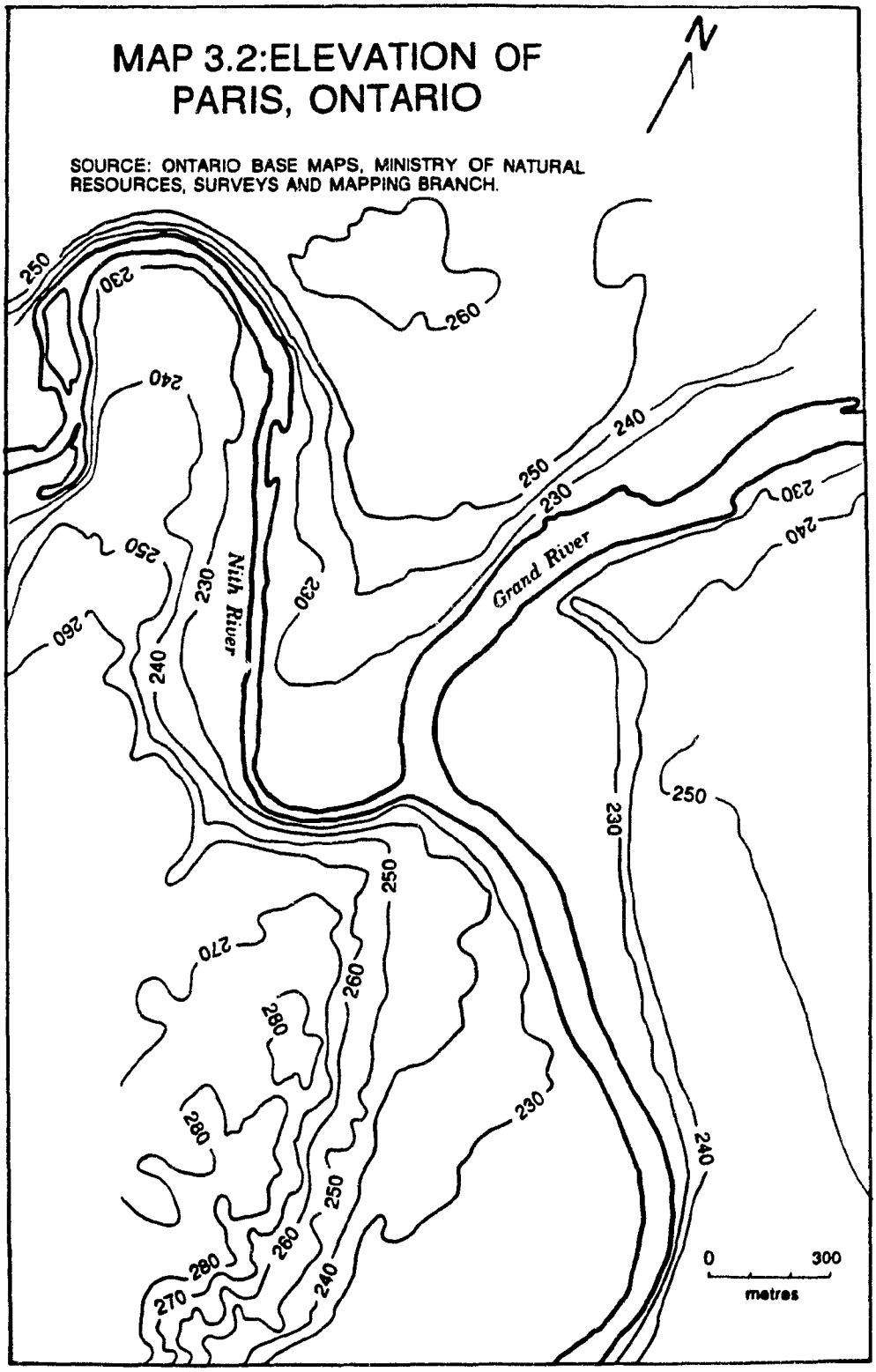
The setting of Paris is a striking one. The broad Grand River here joins the narrow Nith River (formerly known as Smith's Creek) to form the "Forks of the Grand," as the settlement was once called. Paradoxically, the Grand has an undramatic river valley, and even has areas on either side of it known as the "upper town flats" and the "lower town flats." But the Nith valley has high, steep lushly vegetated slopes along the south and west banks. The effect is particularly pronounced right at the Forks. (See Map 3.1 for the location of Paris in Southern Ontario, and Map 3.2 for the elevation of Paris.) This aspect of Paris, which perhaps has ironic implications for the trickle-down theory of water provision, was described by W.H. Smith as follows:

> It is divided into the upper town and lower town, (Smith's Creek, which here enters the Grand River, separating the two); and the most singular circumstance connected with it is that the water runs from the lower town to the upper town. Not that the water absolutely runs uphill, but the banks in the lower town, on the upper portion of the streams are low, while below the banks rise suddenly to a considerable height.[1]

The rivers were important as they provided power for industry. D.A. Smith believes that "without the rivers, there would probably be no Paris."[2] They provided power for the grinding of gypsum, the sawing of logs, and the operation of machinery.[3] The Nith had been harnessed in the 1820s,[4] but the Grand was not dammed until 1854.[5] Still, "by 1840, as a result of the building of the dam and races, Paris was taking on the characteristics of a mill town."[6] Sixty years later, it was still very much a mill town, as a 1901 promotional booklet reads:

MAP 3.1: THE LOCATION OF PARIS IN SOUTHERN ONTARIO




MAP 3.2:ELEVATION OF PARIS, ONTARIO
N
SOURCE: ONTARIO BASE MAPS, MINISTRY OF NATURAL RESOURCES, SURVEYS AND MAPPING BRANCH.
Nith River
Grand River
250
230
260
240
270
280
0
300
metres

> Paris is essentially an industrial centre, and can boast of more factories than any one town in a hundred of similar size. Situate on high grounds, amid charming scenery, its healthful location makes it also an ideal place in which to reside. The Grand and Nith Rivers join forces here and individually furnish motive power for a number of factories, but there are sources of much energy still open for development on each stream.[7]

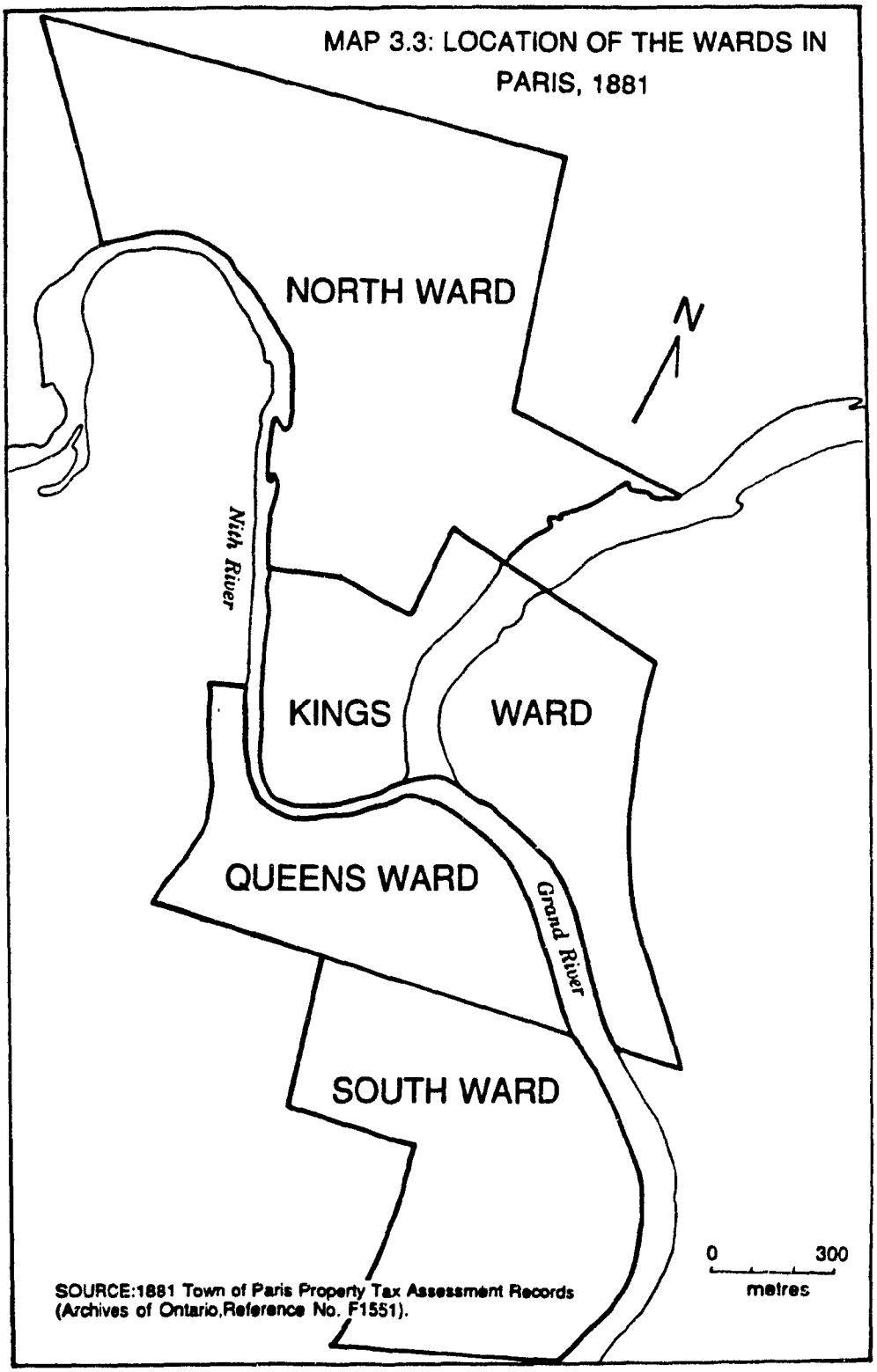
Hiram Capron (who, by his own words, "may be denominated the Father of Paris"[8]), wanted to call the early settlement "Paris" because of its plaster of Paris deposits. In a letter dated 3 January 1830 which he sent to his brother, Capron states, "I will shortly send you a beautiful plan of said town which I intend to call Paris being built upon a plaster bed."[9] The other settlers resisted this name, as it reminded them of the recent political violence in Paris, France.[10] After being called Forks of the Grand, Nithsville, and Parisville, the name of Paris was accepted in 1831.[11]

2. THE ECONOMIC HISTORY OF PARIS

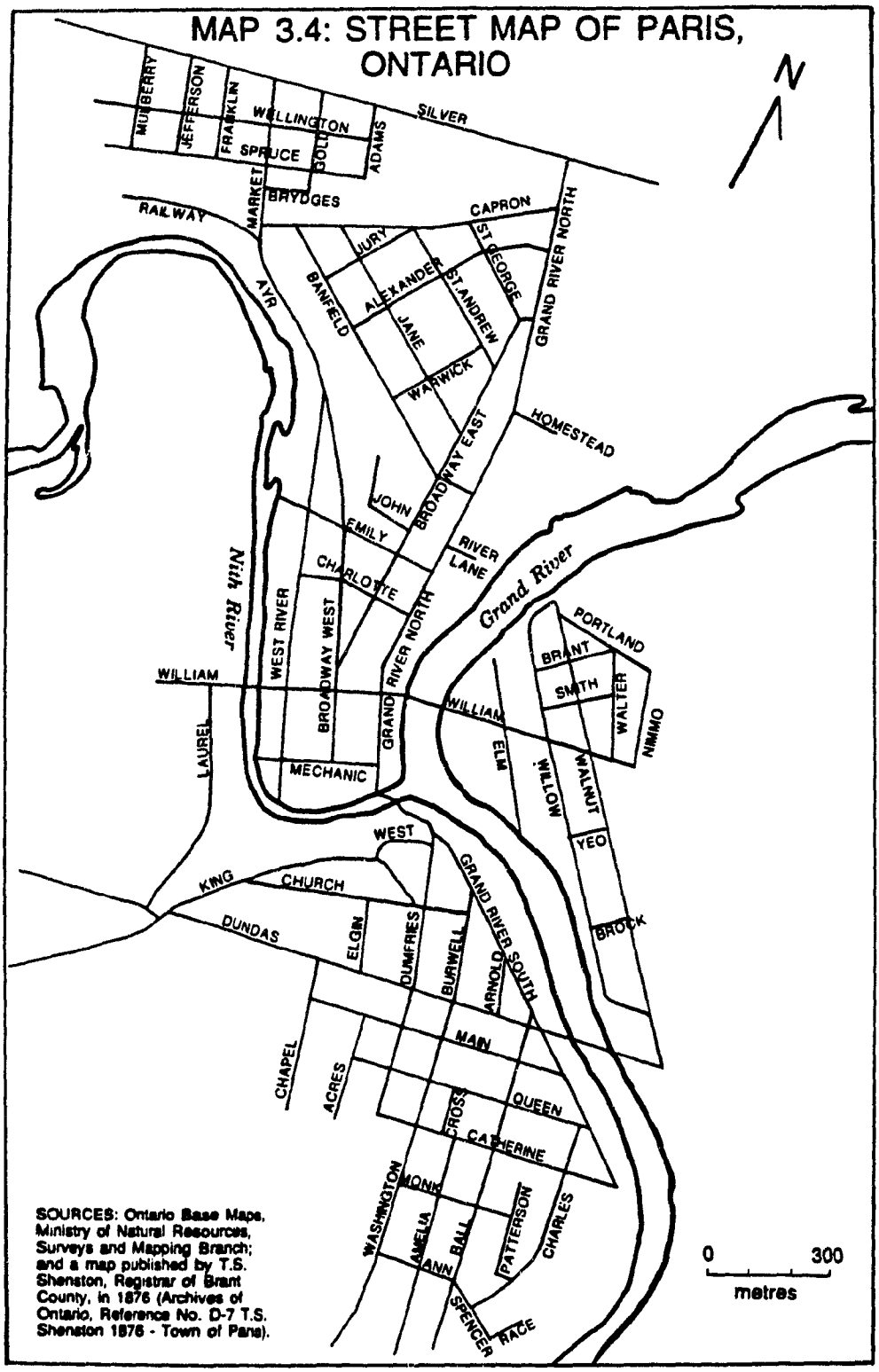
Hiram Capron earned his early wealth from an iron foundry which he started in Normandale, Ontario in 1822.[122] He used this wealth to purchase all of the land that would constitute pre-1900 Paris, except that area south of Dundas Street, now known as the South Ward.[13] (See Map 3.3 for the location of the wards in Paris in 1881, and see Map 3.4 for the location of the streets in Paris.) Capron owned most of the town, but did not conduct most of its economic activity. He preferred to rent his property for others to work. This applied to his plaster pits,[14] and to the water rights from his dam.[15]

D.A. Smith states that the man who "dominated the economic life" of Paris from 1831 to at least 1850 was Norman Hamilton.[16] He was "one of those pushing, independent, succeed-at-any-price Yankees."[17] He died in 1874, and John Penman succeeded him as the "dominating figure."[18] All of Capron, Hamilton and Penman were Americans.

Penman's father had established a textile mill in Woodstock, Ontario in 1861,[19] and then with his son expanded into Paris in 1868.[20] In 1887, John Penman purchased a local competing textile mill,[21] which was operated by a former partner of his.[22] By 1893, Penman had:


MAP 3.3: LOCATION OF THE WARDS IN PARIS, 1881
NORTH WARD
N
Nith River
KINGS
WARD
QUEENS WARD
Grand River
SOUTH WARD
0
300
metres
SOURCE:1881 Town of Paris Property Tax Assessment Records (Archives of Ontario,Reference No. F1551).

MAP 3.4: STREET MAP OF PARIS, ONTARIO



SOURCES: Ontario Base Maps, Ministry of Natural Resources, Surveys and Mapping Branch; and a map published by T.S. Shenston, Registrar of Brant County, in 1876 (Archives of Ontario, Reference No. D-7 T.S. Shenston 1876 - Town of Paris).

> gained control of the best mill sites and water rights in town and through additional purchases consolidated his title to the limited level land along the banks of both the Nith and Grand Rivers. By the early twentieth century Penmans employed 1,000 workers in a community whose total population numbered only 3,500.[23]

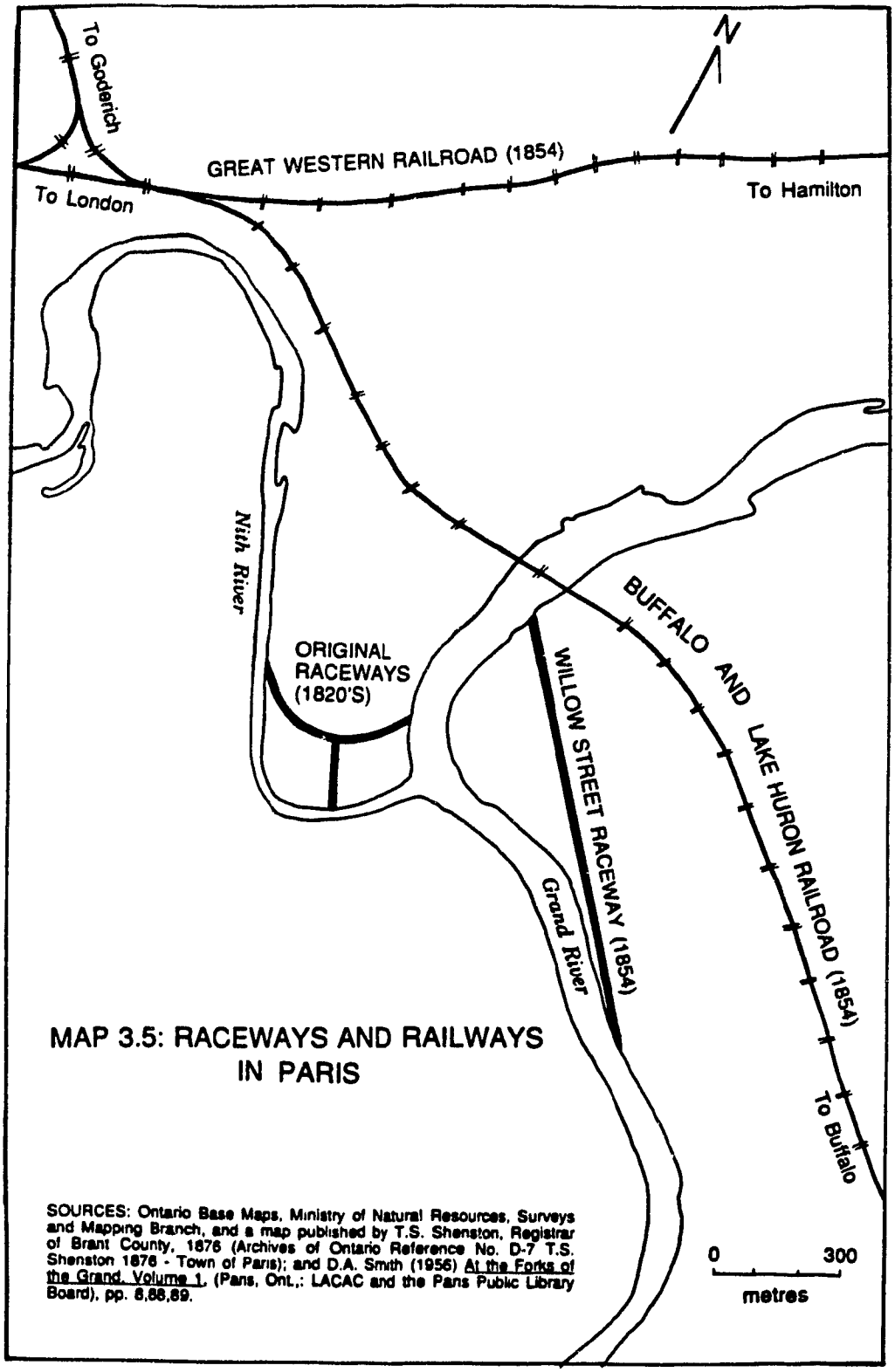
At its peak, Penman's Limited (as it was called after Penman sold out his interest in 1906) "was the largest knit-goods manufacturer in the country."[24] Textile firms preferred to locate in small towns since they could better secure a low-waged, female work force in such places where high paying jobs for men were scarce. This necessitated that wives worked.[25] In 1883, 440 of the 750 textile labourers in Paris were female.[26] It has been suggested that Penman's concern for this female work force resulted in his active repression of the growth of the town:

> Through the 1880's, the Penman's firm was expanding, but the population of Paris was not. In fact there were fewer people living in town in 1891 than there had been a decade before. Penman controlled and chose to leave undeveloped the remaining mill sites along the Nith and the Grand. In this way he removed the risk that other large employers might locate in town. Paradoxically, firms that might hire men, particularly the male kin of his own female mill workers, posed the greatest threat. Good jobs for men locally would remove the pressing economic incentive for town women to go into the mill. But a strategy of restricting competing employers also limited growth in the town's population generally.[27]

Even the editor of the Brant Review suspected that growth was being purposely restricted. Writing in 1880, he observed that some Parisians "who want to keep all the business to themselves, are opposed to any more business men coming into the town."[28]

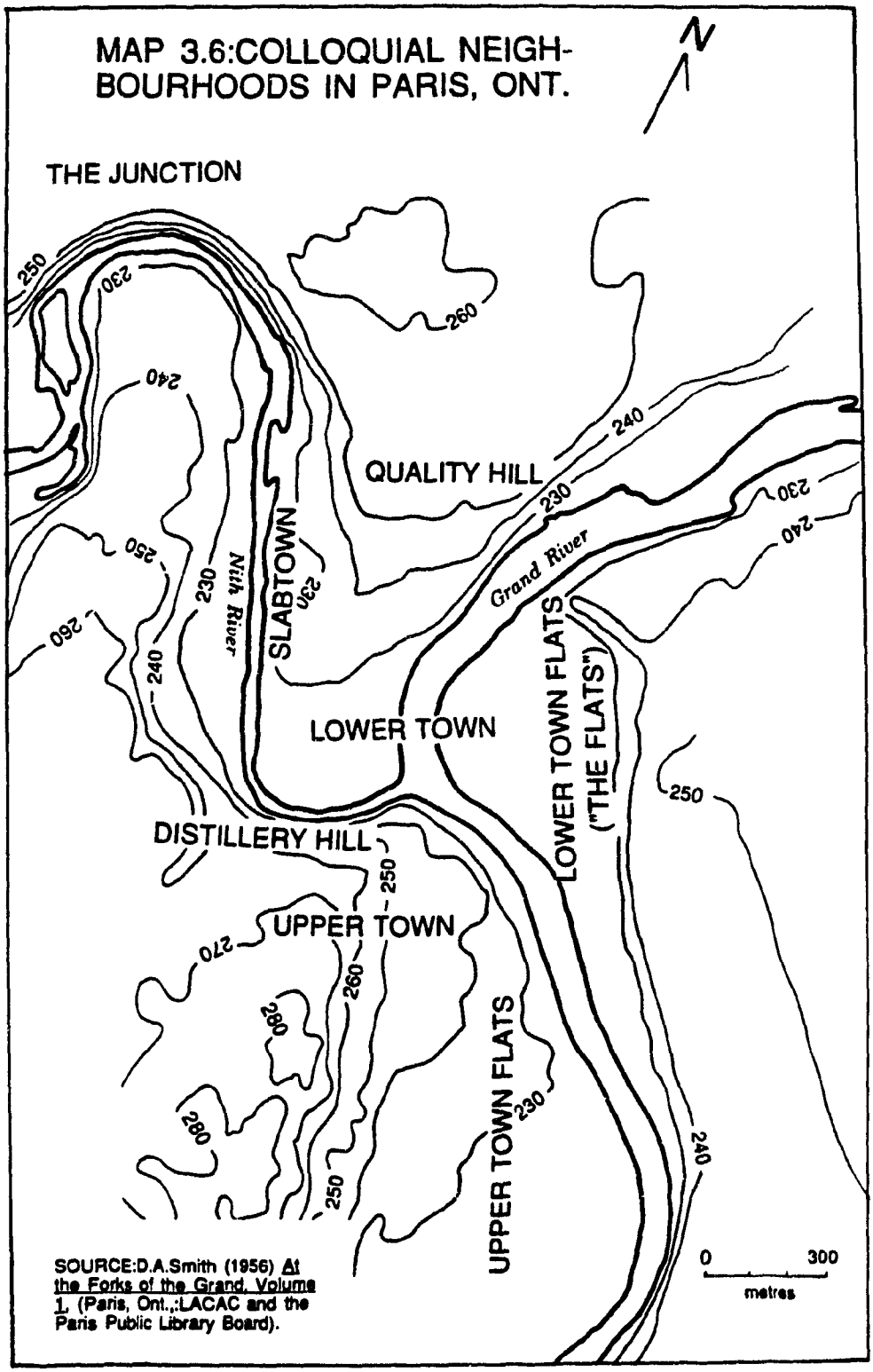
3. THE GEOGRAPHY OF PARIS' GROWTH

The periods of growth in Paris coincided with certain technological developments, and expressed themselves in ascertainable spatial patterns. The focus of activity shifted from Dundas Street (the old Governor's Road between South Ward and Queens Ward in upper town) to the raceways (in Kings Ward of lower town) by about 1850, and then to the "Junction" of the two railways (in North Ward of lower town) after 1860.[29] (See Map 3.5 for the location of the railways and raceways in Paris, and see Map 3.6 for the location of colloquial



MAP 3.5: RACEWAYS AND RAILWAYS IN PARIS

SOURCES: Ontario Base Maps, Ministry of Natural Resources, Surveys and Mapping Branch, and a map published by T.S. Shenston, Registrar of Brant County, 1876 (Archives of Ontario Reference No. D-7 T.S. Shenston 1876 - Town of Paris); and D.A. Smith (1956) At the Forks of the Grand, Volume 1, (Paris, Ont.,: LACAC and the Paris Public Library Board), pp. 8,88,89.


MAP 3.6:COLLOQUIAL NEIGHBOURHOODS IN PARIS, ONT.
N
THE JUNCTION
QUALITY HILL
SLABTOWN
Nith River
Grand River
LOWER TOWN
DISTILLERY HILL
UPPER TOWN
LOWER TOWN FLATS ("THE FLATS")
UPPER TOWN FLATS
250
230
240
260
270
280
0
300
metres
SOURCE:D.A.Smith (1956) At the Forks of the Grand, Volume 1, (Paris, Ont.,:LACAC and the Paris Public Library Board).

neighbourhoods.) This represents a steady movement of business activity northward, from the old upper town to the new lower town. This trend is reflected even as late as the interval 1881 to 1930, by comparing the relative share by ward of the town's population:[30]

TABLE 3.1

DISTRIBUTION OF THE POPULATION OF PARIS BY WARD, 1881-1930

Ward	1881 Population of Ward	% of Paris Population	1930 Population of Ward	% of Paris Population	1881-1930 Net Change (%)
North	868	28.3	1,520	36.1	+ 7.8
Kings	824	26.9	1,185	28.2	+ 1.3
Queens	609	19.9	543	12.9	- 7.0
South	761	24.8	957	22.7	- 2.1

Of the period of development most influenced by Dundas Street, D.A. Smith has written:

> Until 1854, the Governor's Road strongly influenced the development of Paris. It increased the value of the fertile land and the gypsum deposits around the Forks, and encouraged Holme, Capron, and other pioneers to establish themselves here. And after the founding of the village, it was an artery along which goods flowed in from Dundas and Hamilton, to be exchanged for farm products that then flowed out.
>
> Furthermore, this highway determined where the economic and social centre of the village should at first lie; for naturally the earlier houses, shops and taverns were concentrated along or near it, particularly on Dundas and Dumfries Streets. And all the churches, the first market, the town hall, and the schools were in this same locality. In fact, by 1850, the larger part of the present [1956] town-area south of the Forks had been settled.[31]

The water power of both the Grand and Nith Rivers was harnessed by the use of dams and raceways in lower town. D.A. Smith has written:

> This concentration of industry along the races affected the development of the community by encouraging the establishment of stores, shops, taverns, and homes in the Lower Town, rather than in the Upper. This trend was apparent even by 1849, when the "Canada Directory" listed 47 businesses of various kinds in the Lower Town as against 31 in the Upper Town. Thirteen years later, "Hutchison's Brantford and Paris Directory for 1862" listed more than 100

> businesses in the Lower Town and around the Junction, and only 40 in the Upper Town. Indeed, in 1860 the business section of the Upper Town looked so deserted that John Galliford of Ingersoll, who had passed through while travelling along the Governor's Road, was perturbed.[32]

Of the effects of the coming of the railways in 1854, D.A. Smith has written:

> The stream of traffic along the Governor's Road began to dwindle: the stage coaches and freight wagons gradually diminished in number. The decline in traffic and business was ruinous to the Upper Town. The majority of innkeepers and merchants deserted their old stands and moved to the Lower Town, the Flats, or the Junction. The heart of Paris gradually shifted to its present position.
>
> Soon, too, the northern boundaries of the Lower Town began to creep northward - a trend that was reflected in the gravelling of Banfield Street in 1858 and the laying of board sidewalks thereon, and soon after in the building along it of a number of houses.[33]

Hiram Capron wrote in 1857:

> Since the opening of the Railroads quite a settlement has taken place around the Depot, and the extension of the Town in this direction, will no doubt go on increasing, particularly when the new Stations of the united companies are erected, - and the preparations are almost completed.[34]

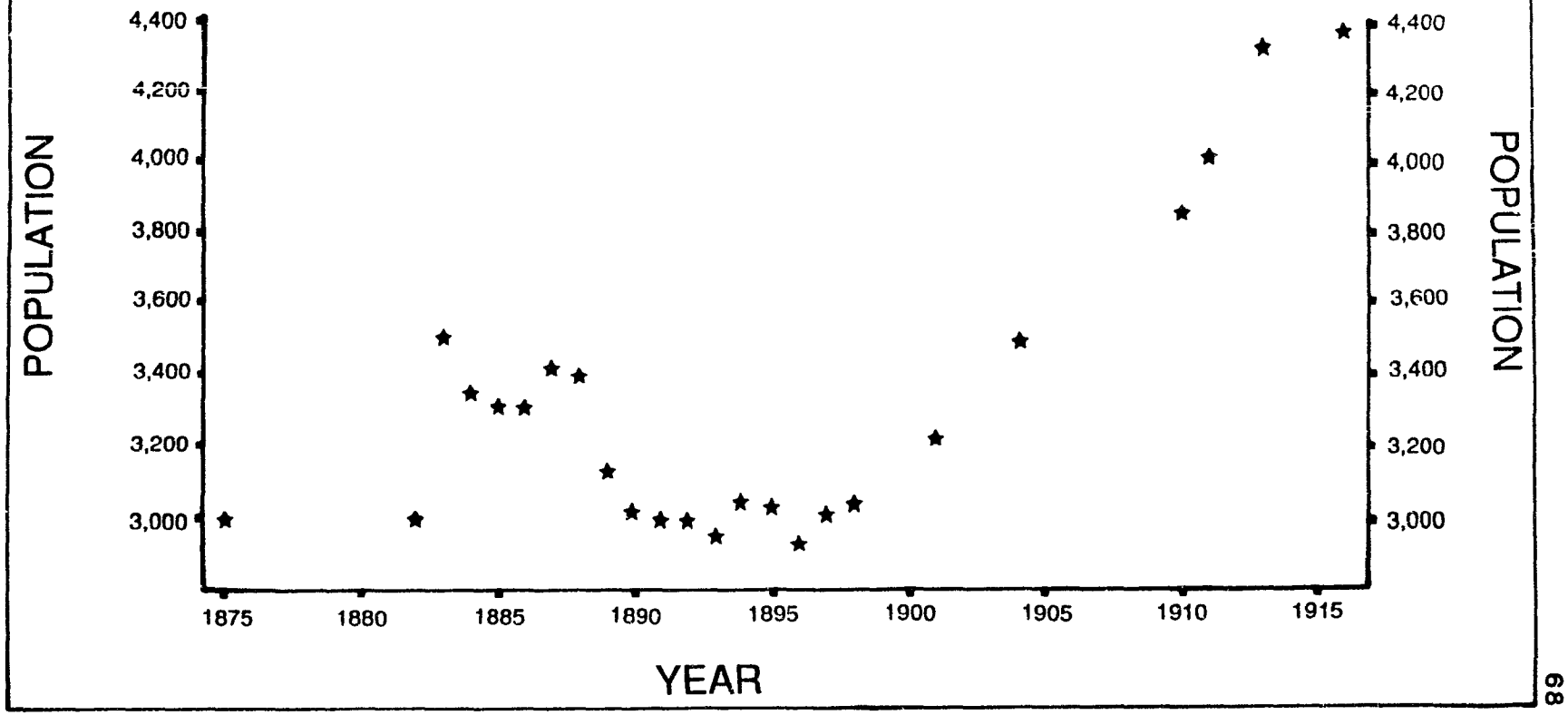
The 1850s were also important years in terms of municipal organization in Paris, as well as for all of Upper Canada, due to the passage of the Municipal Corporations Act of 1849.[35] The delegation of power from the colonial government to the municipal level enabled Paris to incorporate as a village in 1850,[36] and as a town in 1856.[37] The population rose during this time from 1,810[38] to 2,439,[39] although it had apparently peaked at 3,000 in 1854.[40] The population did not rise much in Paris from the 1850s until after the turn of the century.[41] (See Figure 3.1 for the population of Paris from 1875-1916.)

4. THE SOCIAL GEOGRAPHY OF PARIS

For historical reasons, it is not surprising that Paris in the 1880s had a distinct social geography. Before Paris became an incorporated village in 1850, it had been divided into two administrative districts.[42] That portion which in 1881 comprised South Ward was, before 1850, part of the Township of Brantford, in the County of Wentworth. The rest of the then town,

FIGURE 3.1:POPULATION OF PARIS, 1875-1916

SOURCE: Town of Paris Property Tax Assessment Records (Archives of Ontario, Reference No. F1551).



which in 1881 comprised Queens Ward and part of Kings Ward, was within the Township of Dumfries, in the County of Halton. The boundary between these two districts was the Governor's road, which in 1881 separated Queens Ward from South Ward. Even today, though Paris is an incorporated town, that portion south of Dundas Street is in a different land division than the portion to the north of it. South of Dundas Street is the first concession of the Township of Brantford. A narrow strip called "the Gore" lies just north of Dundas Street and south of Mechanic Street. North of this gore is the first concession of the Township of South Dumfries.

The simplest form of social area analysis in Paris is to distinguish between the upper town and the lower town. According to D.A. Smith:

> Almost from the beginning this geographical division separated Parisians into two jealous and hostile factions, and these factions squandered their energies in striving for local advantage. They would seldom work together for the common good . . . . Before 1840, the majority of settlers in the Upper Town had come from England, Scotland and Northern Ireland, and they were Protestants. The majority in the Lower Town, on the other hand, had come from the United States and Southern Ireland, and quite a few were Roman Catholics. The inhabitants of the Lower Town, it has been said, owed their allegiance to "King" Capron; those of the Upper Town, to another King, probably King William IV.[43]

The town had a smaller scale social geography as well. Within the lower town, there was the high-class area of Quality Hill, which has been described as follows:

> Up until 1914 the area of Grand River Street North . . . was known as 'Quality Hill,' where the social and economic elite of the Town of Paris lived. In those days, it was evident that the economic, religious and municipal activities of Paris were dominated by the small cohesive group of 'aristocrats' living up on the Hill.[44]

Still in lower town, and along West River Street on the east bank of the Nith River, was the working-class area of "Slabtown." On the east side of the Grand River was a more reputable working-class area called "the Flats." (More precisely, these are the lower town flats; the upper town flats, though not often referred to as such, are on the west side of the Grand River, in South Ward.) Joy Parr has written that Paris "was a community of separate precincts," and that altitude was "a metaphor for the social hierarchy of the town."[45] This

metaphor was certainly true within the upper and lower towns, but not between them. The lower town clearly became the more dominant of the two. Within the lower town, Quality Hill had a "higher" status than did the mill family areas "which flooded too regularly in spring."[46] In the upper town, the former town core in Queens Ward was more prestigious than the lower lying area in South Ward. Of this South Ward area, Capron wrote in 1857:

> For a distance of half a mile south of Dundas Street, the settlements of the inhabitants extend, spread over a very beautiful expanse of land, gently sloping towards the river, locally dominated the Upper Town Flats. There, most of the occupiers are owners of their little homesteads, and land obtains a very low value compared with what we see in similar situations in other localities.[47]

Within Queens Ward, the residential section located on the slope leading to the west and south banks of the Nith River were called "Distillery Hill," and were occupied by squatters.[48] D.A. Smith provides this description of the social geography of Paris:

> Naturally the mill-owners and their workers decided to live near their places of work. The owners, for the most part, lived in large houses on Broadway Street, Charlotte, and Emily - in other words, on Snob or Quality Hill. The majority of the mill-workers and farm labourers lived in slab houses (the slabs were given away free by the saw-mills) on West River Street (Slabtown) and Distillery Hill. Distillery Hill . . . got its name from two distilleries that were once near the river's edge, and it was first occupied by squatters - Irish families that worked for Capron.
>
> As soon as mills were beginning to attract neighbouring farmers, merchants began to establish stores and shops on the peninsula, particularly on Grand River Street. Thus, after 1841, we find that what is now the business section of Paris was being rapidly built up, so that by 1850 there were as many businesses in the Lower Town as in the Upper Town.[49]

Even at the turn of the century, hostilities were expressed between residents of different parts of the town. John Penman felt that the growth of Paris had been retarded by "the sectional and jealous feeling that existed between different parts of the town, and individuals in the town."[50] Reverend C. Silcox remembered that between 1894 and 1904, there had been snowball fights between the upper town boys and the Quality Hill boys. Quality Hill almost always won, and some of the snowballs "had hard pieces of ice or even rocks at their core."[51] During these fights, the Quality Hill boys were "supported by loyal cohorts from the Station, Slabtown, and the Flats."[52]

The local rivalry may explain why, in the 1850s, both the upper town and lower town tried to harness the Grand River as a power source for industrial development The efforts of the lower town investors were successful, as in 1854 the "works were carried forward with the utmost energy," and were driving factories by 1857.[53] Of the upper town raceway scheme, Capron said in 1857:

> The projectors of this work are with good reason sanguine as to its immediate success, for the stockholders, being to a great extent, property holders in the neighbourhood, which will be directly affected by the development of its capabilities, they are prepared to sell or lease water power, or lots on which to erect machinery, upon terms altogether different from those which they would require, were their speculation alone confined to making profit out of the sale of the mill privileges.[54]

The local rivalry was also evident at town council meetings, where "the council chamber was a field upon which the champions of Upper Town and Lower Town, or of the Tory and Reform parties, met in noisy battle."[55] In Paris, there was strong interest among citizens in their local government between 1850 and 1900,[56] perhaps because "there were two and sometimes three local papers, each of which would violently support opposing points of view and would attack with an amazing amount of vituperation anybody who dared to differ."[57] Thus, Parisians "regularly crowded into the council chamber to influence the deliberations of the councillors. They applauded, hissed and hurled insults back and forth. They often delayed the proceedings so much the meetings last until 2 a.m."[58]

The debate in Paris on the issue of waterworks in 1882 was particularly vehement. A chronology of important waterworks events in Paris appears in Table 3 2. A listing of the major participants in the waterworks debate appears in Table 3.3.

While the initial settlement of Paris occurred because of its natural setting, the pattern of economic growth in later years was influenced by technological changes in transportation and production. "Progress" drew the centre of activity from the upper town to the lower town. This not only created resentment between residents of the two areas, but also gave rise to the characterization of lower town residents as "hick." The South Ward was, even from the time of

earliest settlement, a place apart from both the lower town and the rest of upper town. Legally, it has always been in a different administrative district than the rest of the town. Socially, its residents were, in the nineteenth century, the least affluent in town, and they lived in unostentatious dwellings. At meetings of Paris council, the lines of argument closely followed the lines which bounded the town into wards.

TABLE 3.2

TIMETABLE OF MAJOR EVENTS

Date	Event
9 May 1877	Paris Town Council debated the merits of a waterworks system as early as this date.
25 July 1881	C.H. Roberts and 150 others petition Paris Town Council for the construction of a waterworks system.
August 1881	C.H. Roberts establishes contact with Engineer Ware of St. Thomas, from whom he receives information with which to promote waterworks development locally.
March 1882	The Province of Ontario passes the Municipal Waterworks Act.
April 1882	Engineer Bell replaces Engineer Ware as C.H. Roberts' consultant.
12 May 1882	A public meeting is held in the Town Hall in Paris to debate the waterworks issue. At this time, bylaw #208, which authorized the borrowing of $30,000 for waterworks, had received second reading by town council.
22 May 1882	In accordance with provincial law, the assent of the eligible voters is sought to confirm bylaw #208. By a margin of 202 - 75, the incurrence of debt to finance the waterworks system was approved.
26 June 1882	Bylaw #208 receives third reading by Paris Town Council.
10 July 1882	Bylaw #209, which empowers Paris Town Council "to construct, maintain and manage" a waterworks system, receives third reading.
16 October 1882	Councillors John Baker, W.C. Jones, and Charles Arnold unsuccessfully try to delay waterworks construction because of their concern over unrealistic cost estimates.
23 October 1882	Construction of the waterworks system begins.
7 May 1883	Engineer Bell resigns from the waterworks project with no explanation given to the public as to his reasons.
3 July 1883	Engineer Lavery is hired to replace Engineer Bell.
18 August 1884	Paris Town Council passes bylaw #229, which authorizes the borrowing of $8,000 "to complete the waterworks system."
December 1884	82 water services are in operation in Paris.

TABLE 3.2 (continued)

Date	Event
11 September 1899	Paris Town Council passes bylaw #393, which authorizes the construction of a second water main across the Grand River, serving the industries located on the Willow Street raceway.
1901	The first sewer is constructed in Paris, a 265-foot section located on Grand River Street North, in the town's commercial core.
27 January 1902	Paris Town Council passes bylaw #436, which removes control over the waterworks system from Council and gives it to the Water and Light Commission of the Town of Paris.
8 June 1903	Paris Town Council passes bylaw #460, which authorizes the conversion of the waterworks pumphouse from being coal burning to being electrically powered, and also authorizes the extension of the waterworks main network to include much of South Ward and North Ward.
29 September 1909	Paris Town Council passes bylaw #538, which authorizes the borrowing of $5,000 to be spent on a pump which will increase the water pressure "at Paris Junction and the higher levels in town."
1910	Water meters are first used by Paris industries.
1939	Water meters are made compulsory for Paris dwellings.

TABLE 3.3

MAJOR ACTORS IN THE DEVELOPMENT OF THE PARIS WATERWORKS

Pro-Waterworks	Anti-Waterworks
The Brant Review and the Paris Transcript, two local weekly newspapers.	The Paris Star, a local weekly newspaper.
C.H. Roberts, a druggist and the primary waterworks promoter.	John Baker, a shoe merchant, a South Ward Councillor for many years between 1880 and 1901, and the primary opponent of the Paris waterworks scheme.
Robert Montgomery, a dry goods merchant.	John Kay, a carpenter.
Hugh Finlayson, a South Ward Councillor in 1882.	Thomas Evans, a paint merchant, a council member in 1884, and mayor of Paris in 1901.
A. Ware and James Bell, two engineers from St. Thomas employed by C.H. Roberts. Bell was later hired by the Town of Paris to build the waterworks.	Charles Arnold and W.C. Jones, two council members in 1882 and 1883 who supported waterworks, but who periodically objected to the methods used to promote and facilitate the project.
John Penman, who personally sought free waterworks service and infrastructure at his Paris Plow Company, while many of the officers of his textile mills did the same on his behalf for those mills.	
J.B. Henderson, General Manager of Penman's mills in the early 1900s.	
Richard Thomson, General Manager of Penman's mills from 1906-1912.	

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2. D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 88.

3. Ibid.

4. Ibid., 8.

5. Ibid., 88.

6. Ibid., 20.

7. Industrial and Picturesque Paris, Canada (J.S. Brown and Son, 1901).

8. Hiram Capron, an 1857 Paris promotion pamphlet, in F. Douglas Reville, History of the County of Brant, vol. 2 (Brantford, ON: Hurley, 1920), 404.

9. Hiram Capron to Horace Capron, 30 January 1830, Archives of Ontario reference number MS 393, reel 11, series H,1,e, envelope 11.

10. D.A. Smith, Forks of the Grand, vol. 1, 19.

11. Ibid.

12. Ibid., 28.

13. Ibid., 5.

14. Ibid., 21.

15. Ibid., 88.

16. Ibid., 61.

17. History of Brant County (Toronto: Warner, Beers and Co., 1883), 468.

18. D.A. Smith, Forks of the Grand, vol. 1, 64.

19. This is from "Finding Aid to the Penman Family Papers," written by the Archives of Ontario, reference number F 181.

20. D.A. Smith, Forks of the Grand, vol. 1, 64.

21. Ibid.

22. Penman Family Papers, Archives of Ontario reference number MU 2312, series 5, box 1.

23. Joy Parr, The Gender of Breadwinners (Toronto: University of Toronto Press, 1990), 15.

24. Ibid., 4.

25. Ibid., 42.

26. Ibid., 15.

27. Ibid., 16.

28. D.A. Smith, Forks of the Grand, vol. 1, 93.

29. Ibid., 87-90.

30. Town of Paris Property Tax Assessments, Archives of Ontario, reference number F 1551, for the years 1881 and 1930.

31. D.A. Smith, Forks of the Grand, vol. 1, 87.

32. Ibid., 88-9.

33. Ibid., 90.

34. Capron, in Reville, History of the County of Brant, 404.

35. See C.F.J. Whebell, "The Upper Canada District Councils Act of 1841 and British Colonial Policy," Journal of Imperial and Commonwealth History 17, no. 2 (1989): 185-209.

36. Capron, in Reville, History of the County of Brant, 408.

37. D.A. Smith, Forks of the Grand, vol. 1, 55.

38. Ibid., 90.

39. Ibid., 55.

40. Ibid., 90.

41. Town of Paris Property Tax Assessments, Archives of Ontario, reference number F 1551, for the years 1882 to 1916.

42. D.A. Smith, Forks of the Grand, 54-5.

43. Ibid., 91-2.

44. Planning Department of the Town of Paris, "Grand River Street North Heritage Conservation District," (September 1987).

45. Parr, Gender of Breadwinners, 6.

46. Ibid.

47. Capron, in Reville, History of the County of Brant, 409-10.

48. Ibid., 412.

49. D.A. Smith, Forks of the Grand, vol. 1, 22-3.

50. Ibid., 93.

51. D.A. Smith, At the Forks of the Grand, vol. 2 (Paris, ON: Paris Public Library Board, 1982), 304.

52. Ibid.

53. Capron, in Reville, History of the County of Brant, 411.

54. Ibid., 410.

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56. Ibid.

57. Ibid., 216.

58. Ibid., 60.

CHAPTER 4

THE POLITICS OF PROVISION

1. INTRODUCTION

This chapter explores the debate that occurred in Paris concerning the issue of waterworks construction. The issue arose as early as 1877[1] and came to a climax on 22 May 1882 when, in accordance with provincial law, the assent of the ratepayers was sought by council in support of their decision to debt finance a waterworks system.[2]

Much of the information which follows was obtained from a "scrapbook" which was compiled by C.H. Roberts, a Paris druggist and an avid waterworks supporter in 1882. The book itself is a wholesale catalogue of druggists' supplies, upon the pages of which Roberts glued predominantly pro-waterworks newspaper clippings.[3] The clippings entail articles and "letters to the editor," all of the latter being published with pseudonyms. It is safe to conclude that some of these letters were written by Roberts himself. Some arithmetic calculations written directly onto earlier blank pages of the book show up as statistics in letters to the editor glued on later pages. Also, information contained in private letters to Roberts from engineers he consulted shows up in later-published letters to the editor. The clippings are arranged in more or less (but with many exceptions) chronological order, with many 1881 articles on the first 36 pages, and those from 1882 and 1883 filling out the volume. Many pages have also been ripped out. Some clippings have become unglued and are just loosely slipped between random pages.

There were three weekly newspapers in Paris in 1882; the Paris Star, which opposed waterworks; the Paris Transcript, and the Brant Review, both of which favoured waterworks

A complete record of the Brant Review is on microfilm at the Paris Public Library, but copies of the Star and the Transcript from this time are not known to exist in any public collections. Clippings from all three, but mostly from the Review and the Transcript, appear in Roberts' scrapbook along with a few from the Brantford Courier.

The positions of the Paris newspapers concerning waterworks can be readily discerned by examining how each of the three reported the affirmative vote on 22 May 1882. The Brant Review wrote:

WATERWORKS CARRIED BY A SWEEPING MAJORITY

> On Monday last the polling on the waterworks by-law took place. There was great excitement all day and the voting was well kept up . . . Two hundred and two voted the waterworks ticket and only 75 were against it . . .[4]

The Paris Transcript wrote:

WATERWORKS: THE BY-LAW CARRIED

> The voting on the By-Law, authorising the issue of debentures to the amount of $30,000 for the purpose of providing a system of waterworks for this town, resulted in its adoption by a majority of 128, each ward pronouncing decidedly in favour of the measure.[5]

However, the Paris Star had a different perspective, and suggested that not many of those opposed to the waterworks bylaw actually voted:

BY-LAW PASSED

> The By-Law to raise thirty thousand dollars for the purpose of establishing Water Works in this town, was voted on in each ward on Monday last. Not much interest was manifested in the Waterworks by the opponents of the scheme; not so however, with those who were in favour of its passing . . . Those in the minority must submit to the decision arrived at. We hope no person will hereafter have to regret the conclusion arrived at on Monday last. Time only can tell.[6]

C.H. Roberts was an ardent supporter of waterworks. On 25 July 1881, he presented Paris Town Council with a petition signed by 150 ratepayers who favoured the construction of a waterworks system. He also sought to have the unused water power of the town's rivers harnessed for industry,[7] and was a member of the influential Paris Board of Trade. When he led the movement for electrical service in Paris, the Brantford Courier wrote (on 10 July 1882),

"Parisians are now agitating the Electric Light boom, and of course the indefatigable Mr. C.H. Roberts is the prime mover. We may next expect to hear our little neighbour petitioning to have the seat of Government removed from Ottawa to their town."[8]

The decision to build a waterworks system in Paris was a controversial one. There were allegations of bad faith, misrepresentation, and quite a lot of hostility. For example, consider this concluding sentence from a letter to the editor of the Brant Review from the Paris Waterworks Committee in 1881: "If we have an opponent to the waterworks system in our midst, let us know at once and decidedly; an enemy in the open field is preferable to one in the grass."[9]

Allegations of bad faith arose almost from the start as, at a town council meeting on 7 May 1877, Councillor Hall said of Councillor Finlayson: "Mr. Finlayson had always been in favour of economy, but it seemed that a great change had come over him. He (Mr. Finlayson) was now in favour of introducing an expensive system of water-works, or else he was trying to hinder any action being taken."[10]

A few major issues arose from the debate. First, who would pay for waterworks? Second, who would benefit from waterworks? Third, how valid were the competing claims which were made concerning the technical aspects and feasibility (and therefore the cost) of the particular system which Paris was considering? The debates on these issues must be put in their political context, because provincial legislation determined who would hold decision-making power in Paris. For this reason, this chapter begins with a consideration of the political structure of municipal government in Ontario in 1882.

2. WHO CONTROLLED MUNICIPAL DECISION-MAKING?

The authorization procedure for the construction of waterworks in Paris was threefold. First, town council must pass on second reading a bylaw authorizing the incurrence of any debt used to finance it.[11] Second, the assent of the electors was required in a referendum[12] held

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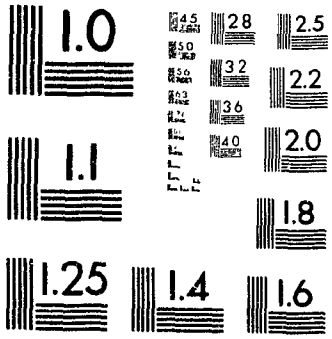

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between three and five weeks after giving public notice of the vote.[13] If a majority of the electors who actually voted approved, then the council could give third and final reading to the bylaw. Thus, decision-making power was in the hands of "electors." Provincial laws dictated who was eligible for membership in these classes.

In 1882 council members were required to be:

(a) "such persons as reside within the Municipality, or within two miles thereof"; and

(b) "natural born or naturalized subjects of Her Majesty" (i.e. British subjects); and

(c) "males"; and

(d) "of the full age of twenty-one years"; and

(e) owners or renters, directly or through his wife, of real estate worth at least the following values:

In Townships:	a freehold of $ 400, or a leasehold of $ 800
In Villages:	a freehold of $ 600, or a leasehold of $1,200
In Towns:	a freehold of $ 800, or a leasehold of $1,600
In Cities:	a freehold of $1,500, or a leasehold of $3,000 [14]

To put these values in perspective, an examination of deeds in the County of Brant Land Registry Office indicates that in Paris in the early 1880s, the cheapest dwellings sold for under $300. The luxury dwellings sold for about $2,000. Thus in the Town of Paris, the requirement of owning land worth at least $800 would have eliminated from council eligibility anyone owning a lower class dwelling. The rental requirement of $1,600 would have eliminated anyone renting lower or middle-class dwellings.

Two provisions further limited council membership. Certain persons were "disqualified" from being on council,[15] while others were "exempted."[16] Disqualified persons included: civil court judges, jailers, sheriffs, bailiffs, tax assessors, and court clerks. Exempted persons included: all persons over age sixty, Members of the Legislative Assembly of Ontario, Senators and Members of Parliament, all civil servants, all judges, coroners, all priests and ministers, lawyers, physicians, surgeons, professors, masters, teachers ("and other members of any University, College or school in Ontario, and all officers and servants thereof"), firemen, and

millers. Exempted individuals were not only ineligible for council, but also for any municipal office. These provisions rendered ineligible for council and other civic offices most of the educated persons in society. A bias seems to have been created in favour of landlords, financiers, merchants, and perhaps skilled tradespeople.

"Electors" is, for our purposes, defined in two ways. For the purpose of voting for council members, the requirements were not as stringent as they were for the purpose of voting on debt bylaws. In order to vote in municipal elections, an elector in 1882 must have been:

(a) male

(b) at least twenty-one years old

(c) a British subject

(d) at least one of:

i. an owner, renter, or householder of real property worth at least, in Townships, $100; in Villages, $200; in Towns, $300, in Cities, $400.

ii. a person in receipt of an annual income of not less than $400 from "some trade, office, calling, or profession"

iii. a farmer's son living on the family farm.[17]

(Note: A "householder" was an occupant of a separate portion of a dwelling, which portion had its own outer door.)[18]

To put an annual income of $400 in perspective, "the average income of a Paris worker was then [in 1885] about $375."[19] Unmarried women and widows were given the right to vote in 1884,[20] subject to the same property qualifications. Married women could not vote.

In order to vote for a debt bylaw, an elector had to be:

(a) male, or an unmarried female, or a widow; and

(b) at least twenty-one years old; and

(c) a British subject; and

(d) one of:

i. an owner of real property worth at least (in towns) $300; and

ii. a renter of real property worth at least (in towns) $300, provided that the lease requires the tenant to pay all municipal taxes in respect of such property, and that such lease extends for a period of time at least as long as that period of time over which the proposed debt is to be repaid.[21]

(Note: Women were first allowed to vote on debt bylaws in 1882.[22])

The Paris waterworks debt was repayable over a thirty year period, the longest period allowed by statute.[23] If it is unlikely that there were any residential tenants in Paris who had a lease as long as thirty years on their dwellings, then it would be safe to conclude that it was only owners of property worth more than $300 who voted on the waterworks bylaw.

Thus an "elector" in Paris in 1882, as in other parts of Ontario, was almost always male and, especially in regards to bylaw votes, from the class of persons who owned property. The power of property ownership was accentuated by a legal provision whereby electors could vote on bylaws, and for councillors, in each ward of a municipality where they owned property.[24] Only one vote was allowed to such voters in elections for mayor and reeve. In a town such as Paris, which had four wards in 1882, certain property owners would have been eligible to cast up to four votes on the waterworks bylaw issue. Such a "plural voter" might have been Charles Whitlaw, who served as mayor of Paris thirteen times. On an 1874 provincial voters list, he is listed as owning forty properties in Paris: seventeen in North Ward, thirteen in Kings Ward, three in Queens Ward, and seven in South Ward.[25]

There were 413 eligible voters for the waterworks bylaw of 1882, including each of the plural votes.[26] Ninety-eight of these voters did not live "in town or within available distance to be polled."[27] Of the 315 "in town" voters, all but thirty-eight actually voted, with 202 voting in favour of waterworks and seventy-five against. By ward, the results are shown in Table 4.1.

Each ward voted in favour of the bylaw with an approval rate ranging from a high of 77.7 percent to a low of 69.2 percent in the South Ward. However, it might be incorrect to

TABLE 4.1

RESULTS OF THE PARIS WATERWORKS VOTE ON BYLAW #208
22 May 1882

Ward	For	Against	Total Voters	% of Town's Total Voters	Approval Rate
North	44	18	62	22.3	70.9
Kings	78	27	105	37.9	74.2
Queens	35	10	45	16.2	77.7
South	45	20	65	23.4	69.2
TOTAL	202	75	277	99.8	72.9

Source: Brant Review, Thursday, 25 May 1882; in C.H. Roberts, 75.

conclude that the majority of the town's residents were in favour or that there was no significant variation in relative ward support. Regarding the former, the town's population in 1882 was 3,070,[28] but less than 315 of these were eligible to vote (since the 315 figure includes all of the plural votes). Regarding the latter, since it is impossible to separate the plural votes and the out-of-town votes from the vote totals for each ward, it cannot be said with certainty what the approval rate was among the resident voters of each ward.

3. WHO WOULD PAY FOR WATERWORKS?

There were two opposed views in Paris concerning the issue of who would in actuality be financing the proposed waterworks project. Everyone knew that Paris bylaw #208, upon which the ratepayers voted on 22 May 1882, called for the incurrence of $30,000 worth of debt which would be spent on the initial construction. This debt would be a charge against the town. The issue then was who would be responsible for repaying the town's debt. The pro-waterworks view posited that waterworks would pay for itself; that no person or class would be

paying money but rather that everyone would save money. The opposition posited that waterworks was a needless expense which would be repaid by the poor to a larger extent than they would benefit. This debate pitted "urban boosters" and self-proclaimed harbingers of "progress" against those who believed in responsible fiscal management and social equity. The local newspapers were a major forum for this debate, and balanced reporting does not appear to have been a major concern for at least one of these newspapers.

a. The Pro-Waterworks View

The pro-waterworks forces, led by C.H. Roberts, fashioned several arguments to support their contention that no one would have to pay the waterworks debt. One of the first of such arguments appeared as a letter to the editor of the Paris Transcript in 1881. It is signed "Parisian," but was probably written by C.H. Roberts.[29] He argues that Paris property taxes will not have to be raised in order to repay the proposed debt since Paris is blessed by being ideally suited for waterworks development. In fact, reduced taxes would "be not altogether impossible if we choose to avail ourselves of what nature has provided us with."[30] At this time, it was estimated that waterworks would cost only $15,500 and that the resulting system would render other fire prevention equipment unnecessary. The Paris Waterworks Committee had argued, for example, that waterworks was preferable to a new fire engine since "a complete system of waterworks will attain the desired end in a more satisfactory manner than any half dozen engine houses and steamers. If we have a W.W. system we no more need either engine house or steamer than a cat needs two tails."[31]

Thus, "Parisian" argued that $9,000 could be raised by selling the outdated steamer Paris then owned and by not having to buy a new, up-to-date one. The remaining $6,500 of debt would be repaid from the annual revenue of the system, which was estimated to be $2,600 per year. This revenue "in about three years would put us out of debt so far as the waterworks are concerned, and then continue as a direct revenue to be otherwise applied as the town might deem fit." "Parisian" concludes:

> Fellow townsmen, if these figures are correct, you cannot but think with me that it is desirable to go into this enterprise at the earliest moment. If they are correct we are annually throwing away money which nature has provided us with a way of saving, and if they are not correct, all I ask is for a more competent man to have a chance of proving them so.[32]

Later in 1881, the cost estimates for the system rose, with engineer Ware of St. Thomas putting the figure at $24,441.[33] When completed, the system grossly exceeded the $30,000 sum which had been initially allocated to it.[34]

A different argument regarding the ability of a waterworks system to pay for itself gained favour among waterworks supporters. It was argued that a waterworks system would reduce the risk of fires in Paris and thus result in lower fire insurance costs. One Paris newspaper boasted that insurance savings of 20 percent would result from the construction of waterworks. This would more than offset any increase in property tax which was necessitated by the debt incurred to finance the system. The article states:

> What more can we ask? Here we have a reduction in our insurance guaranteed which will more than cover the increased taxation, to provide payment for the investment. We thus have a protection against fire free of cost so to speak, as well as an unlimited supply of pure wholesome water at our command, which will not cost those who use it as much per annum as it does now to keep their wells and pumps in order.[35]

With this argument, too, it is assumed that all Parisians will benefit equally by lower insurance rates, and that the project will not cost anyone anything. One Paris newspaper wrote, "The reduction in our insurances of one dollar in every five is also an argument which touches the pocket of every man, both rich and poor. This will counter balance all the extra taxes we may have to pay."[36]

In Paris newspapers, it was claimed that Brantford's insurance rates were "30 per cent lower than in our town,"[37] and that Guelph's insurance rates had "been lowered over 25% by the various companies, on account of water-works."[38] Letters were obtained from insurance agents stating that "upon the completion of the contemplated water-works for your town, we are prepared to grant an average reduction of 20 per cent in our rates."[39] (South Ward Councillor

John Baker pointed out, however, that most of such letters were "non commital,"[40] probably meaning that they were not binding in law.)

Regardless of whether the argument was based on lower insurance costs or the savings to be had by not needing to purchase steam-driven fire engines, fire concerns were expressed in the pro-waterworks conception of who would pay for waterworks. These concerns may have been "prompted by the loss at Messrs. Clay and McCosh's factory,"[41] where a fire caused damage in July 1880.[42]

Waterworks supporters had a difficult time explaining why waterworks was, on the one hand, a producer of profit and, on the other, a venture which private companies would not readily pursue. A letter to the editor of the Brant Review in 1881 stated that waterworks investment could be made "with the certainty of it being a source of profit."[43] Another stated, "Numerous other instances could be cited but it is not necessary to prove to unbiased minds that a comparatively inexpensive scheme for supplying such a necessary commodity as water at a reasonable figure must result in profit to the owner thereof."[44]

Still, supporters acknowledged that private waterworks developments were not common, as "no body of men can be found to undertake any such responsibility unless there is a certainty of it being a safe and profitable investment."[45] It was known that private waterworks existed in Dundas, Brantford and Woodstock only because those municipal governments agreed to "guarantee a rate of interest to a company to establish waterworks."[46] The Paris Transcript explained that a profit would result as shown in Table 4.2.

However, this calculation shows no operating costs, employee salaries, or costs of repair. The Brant Review made less of an attempt to explain the way in which a profit would result:

> Here we have real, tangible benefits to be gained to the town, such as: A cheap and efficient fire protection, and a low rate to pay for insurance against fire, a bountiful supply of most excellent drinking water for household purposes, and water for gardens and lawns; which if our citizens fully appreciate and take

TABLE 4.2

THE PARIS TRANSCRIPT'S PROFIT ESTIMATE FOR WATERWORKS

Total Savings From Waterworks:		
Total value of insurable property in Paris	$500,000	
Cost of insuring this property at 1% for coverage	5,000	
Proposed insurance savings from waterworks $1,300 (25% of 1% of total land value)	1,300	
Total Income From Waterworks:		
Income per annum from railroads for water service	1,000	
Income per annum from estimated 50 domestic subscribers at $10 each	500	
	1,500	1,500
Total Income and Savings:		$2,800
Total Cost of Waterworks:		
The annual expense of repaying the waterworks debenture of $30,000 at 6% over 30 years		2,179
Total Income and Savings Subtract Cost of Waterworks (i.e. Profit)		621*

*Note: The article contained an arithmetic error, and concluded that the profit would be $629. ($2,800 minus $2,179 does not equal $629)

Source: Paris Transcript, April or May 1882, in C.H. Roberts, 55.

> advantage of, will make the investment a source of revenue instead of leading to a burdensome debt. It is not necessary to go into details as it will be generally conceded that moneys expended for this object will be judiciously expended.[47]

As for the costs of ongoing service, it was alleged that there would be no flat rate system in effect for water consumption. The waterworks committee wrote in 1881, "An opinion seems to prevail that all households will be compelled to take water. Such is not the case, only those who wish to take it, and then only pay in proportion to the amount used."[48]

A letter to the editor of the Brant Review assured "a certainty of an unlimited supply of water for domestic use at a cost within the reach of the poorest man."[49]

b. The Anti-Waterworks View

The anti-waterworks movement had its own arguments, but it is difficult to find many instances where they were expressed. Copies of the only anti-waterworks newspaper, the Paris Star, are not available for this time period. C.H. Roberts had very few clippings from the Star in his scrapbook. The best sources of these arguments are the often truncated accounts in the other newspapers of the concerns expressed by South Ward Councillor John Baker.

The inconsistency of the argument that waterworks would be profitable, yet that private investors were not eager to own them, was not lost on Baker. He is reported as having said at a council meeting, "If the reports in the papers were correct about it being a paying investment, why did not a company go into it?"[50] Baker viewed Paris society not as an undifferentiated mass, as was implicit in the arguments of the waterworks supporters. Baker instead examined the issue to see which groups in that society would pay and which would benefit. At the same council meeting on 28 April 1882, Baker said, "It is going to be a profitable investment for some one. If I had the money I should be glad to buy the debentures. I would be a rich man at the end of thirty years."[51]

On 10 July 1882, bylaw #209 was passed by Paris Town Council. This bylaw enabled the town to "construct, maintain and manage" the proposed waterworks system.[52] It was

reported that "no opposition was offered to the by-law except by Mr. Baker."[53] His concerns, which centred on overspending and social unfairness, were reported in the following derogatory manner by the Paris Transcript:

> Mr. Baker was happy to say that Paris was now tolerably comfortable but it wouldn't be so long, if we put this yoke around our necks. In his own peculiarly vigorous style of speech, accompanied by appropriate gestures, he went on to point out the inequities of the waterworks movement and to warn council of the disasters which would be sure to flow through all the pipes upon the unfortunate town.[54]

The Brant Review's summary of this speech by Baker was more lengthy, and included an allegation that waterworks would run over budget, and be financed by the poor, for the benefit of the factories in town:

> He went over his oft repeated tale of heavy taxation and the town's ruin. Paris was comfortable at present he was happy to say, from very low taxation, but would not be long in the comfortable position. If they passed the by-law it would put a rope around our necks. He was astonished at Mr. Finlayson taking the course he did, although not so with other members of the council as they were extravagant men . . . We had many things that needed to be looked after and would require a large amount of money to put in a proper condition. There were sidewalks and streets . . . rivers and streams had to be bridged . . . He urged the council to look things in the face. They were making the poor poorer running the town into debt . . . There would not be revenue collected from the waterworks to pay a collector, as there was better water to be had from the wells, than from that thing. He should vote against the bylaw if he did so alone. It might be an inducement to manufacturers, but he did not see why everything should be done for them. The government gave them protection, etc. The job would cost the town forty maybe fifty thousand dollars before completed.[55]

Baker's concern with debt was perhaps well-founded. Before the passage of the $30,000 waterworks bylaw in June 1882, Paris' total debt was only $3,697.[56]

John Baker was not accorded much respect by the local newspapers or by his fellow councillors. The Brant Review reports that during a council meeting in 1881, "John Baker was told that if he did not support waterworks, he would not be elected again."[57] It did not report who it was that made this remark. Of another council meeting in 1882, the Review reports that, "Mr. Baker here indulged his propensity for generating gas to such an extent that one of the councillors out of all patience told him to 'shut up his mouth.'"[58]

And finally, this 1881 article in the Brant Review clearly is intended to describe John Baker:

> A story is told of an emigrant from the Emerald Isle, who, on arriving at Castle Garden, which it is well known is the first land new arrivals touch in America, asked, 'Is there a Government in this Country?' 'Yes,' was the answer. 'Well, thin, I am agin it,' was the characteristic reply. This story is recalled by the actions of a certain councillor for South Ward, in reference to the Engine House, Waterworks, and in fact every enterprise involving the expenditure of money be it great or small. The expression invariably comes out, 'I am agin it.' No matter how justifiable the expenditure, no matter what the object to be attained, this chronic oppositionist is 'agin it.' This opposition . . . may arise from ignorance and be utterly unreasonable and childish, but it militates more or less against every improvement contemplated by our city fathers. It is unfortunate that all such men do not live in the backwoods, where their policy can only result in keeping themselves in a state of semi-barbarity; and it is especially unfortunate when such a man is chosen to represent a ward in the council of a town, where the greatest energy and push are requisite to its prosperity.[59]

Only the Paris Star was sympathetic to the anti-waterworks view of who would pay as its editor wrote, "When we are told that it will cost us ultimately nothing by those who are strenuously advocating the adoption of the scheme, we feel inclined to look on it in an unfavourable light."[60]

The following letter to the editor of the Brant Review, signed "Workingman," comments upon balanced journalism and the impact of waterworks on Paris social classes:

> I have noticed almost weekly communications [letters to the editor] in your paper, but they have been altogether too one sided to represent the true sentiments of the community on this subject . . . . What I want to ask Mr. Editor is, of what use will waterworks be to the generality of the workingmen of Paris. In what single point will the poor man be benefitted. Our taxes will be higher, without adequate compensation in the way of greater conveniences or improvements in which we can participate. Most of us have wells of splendid water, and even had we not, could ill afford to pay such prices as are charged by most waterworks companies. Our dwellings are not subject to great risks from fire, and we will gain nothing from a decrease of expenses in the shape of reduced insurance . . . . The waterworks scheme would seem to be a plan for taxing the workingman for the benefit of the few manufacturers and store keepers.[61]

As for the argument that waterworks will pay for itself, the writer of this letter continued:

> Again I see it is stated that waterworks will not cost a cent, but will put money in the town treasury. Well, Mr. Editor, anyone who can swallow such nonsense as this should be made to swallow a box of blue pills. Other towns pay

> $50,000 and more for waterworks and it will be found that Paris will have to do the same if the people are induced to vote for them.[62]

The use by "Workingman" of the word "induced" indicates that he perceived the populace to be innately opposed to waterworks, but that some force was at work trying to alter their opinion. Like John Baker, "Workingman" too was concerned about debt and taxation levels, as he noted a connection between the emerging 1880s boom and the railway boom of the 1850s:

> We have had one example already, of the effects of debt and a high rate of taxation on the town's prosperity, and you may be sure those whose memories can carry them back to that time will not be in a hurry to again bring a state of affairs similar to what then existed.[63]

During the railway boom, the Town of Paris' L150,000 loan became worthless as the Grand Trunk Railroad went bankrupt in 1857.[64] A widespread depression was particularly adverse to Paris' economy from 1857 to at least 1864.[65]

"Workingman's" letter was met with this reply in the following issue of the Brant Review, which was signed, "Another Workingman": ". . . do not think for a moment Mr. Editor that he represents correctly the sentiments of the workingmen of Paris. We as a class are intelligent and in favour of improvement if it does cost us a small sum annually."[66]

c. The Public Meeting of 12 May 1882

The waterworks debate reached its climax at the public meeting of 12 May 1882, which was held in the Town Hall which still stands on Church Street. D.A. Smith tells us that this meeting lasted until 3:00 a.m. and that "feeling ran high."[67] The Brant Review introduced its account of the proceedings with this predictable summary: "The supporters of the scheme had by far the best of the meeting so far as argument went, and persons capable of being convinced by fairly put facts must have gone away determined to vote for waterworks."[68]

At this meeting, waterworks supporter and merchant miller A.H. Baird repeated the claim that, since landowners would save money on fire insurance, therefore the town as a whole would benefit. The Brant Review's summary of his speech reads, "Those on whom the

burden of taxation falls will have a reduction in insurance that will more than make up the extra tax, and waterworks would really cost us nothing."[69] Another supporter, Robert Montgomery, denied that poor people would be paying more than their share of the expense: "It had been claimed that the poor man paid the waterworks tax. They only paid a small portion, the bulk of the tax was paid by the business men and manufacturers. This was a case where all paid in proportion to their taxations."[70]

Waterworks opponents emphasized the class nature of the issue. Thomas Evans argued, "If the business men looked at the question from a selfish stand point he claimed the right to do the same."[71] (Mr. Evans was by 1901 a merchant who had become the mayor of Paris; he was also a Biblical scholar who "opposed the religious establishment.")[72] John Kay stated that in Woodstock, waterworks had not been a source of revenue, but "cost the town 16 per cent."[73] By this he probably meant that it resulted in a tax hike of 16 percent. Further, he claimed that this increase "was not coming out of the pockets of the rich men who had lawns and shrubberies, but from poor people."[74]

South Ward Councillor John Baker attended this meeting as well, and repeated his concerns over municipal debt, stating, "The great question is, shall we run in debt $30,000?"[75] He was opposed by Queens Ward Councillor Hugh Finlayson, who had served as the first mayor of the newly incorporated Town of Paris in 1856 at the height of the railway boom.[76] The Paris Transcript summarized Finlayson's address as follows: "We were sure to get into debt, do what we would, and we had better go into debt for something useful."[77] The Brant Review summarized Finlayson with, "There seemed a disposition on the part of some to go into debt, and he thought there could be nothing better than waterworks to go into debt for."[78]

Finally, a pro-waterworks flyer was printed just days before the vote of 22 May 1882. It was a compilation of clippings from the Paris Transcript of 19 May 1882. It stated: "FACT - A poor man in the South Ward is assessed for $400. His increased tax, if the waterworks by-law is carried, will be not more than 90 cents, at 2 mills and a fifth."[79] The "fact" of the matter,

though, was that when the 1882 budget was passed later that summer, the increase in the tax rate was four mills (from eleven to fifteen).[80]

By 15 July 1883, even the Paris Transcript was exasperated with the actions of the waterworks promoters. Perhaps in an effort to save face over its earlier strong support for waterworks, the Transcript blamed the rising costs and numerous technical complications not on waterworks itself, but on the people entrusted to manage it. Seemingly referring to C.H. Roberts, the Transcript stated:

> Unless wiser counsels speedily prevail, the time will come when the Paris waterworks debt will be a curse, like the G.T.R. bonus and the building of the Town Hall; and it may be that the same gentleman, who was a prominent advocate of these enterprises and succeeded in mismanaging them so as to make them a curse instead of a blessing, is the party now, were the truth known, who is responsible to a very large extent for the perfect botch which is being made of this new - and if only managed with ordinary business ability - most promising enterprise.[81]

d. The Role of One Nineteenth Century Weekly Town Newspaper

The preceding discussion of who would be paying for waterworks has been considered concurrently with discussion of the ideology and practices of Paris newspapers. This was done because much of the data in these sections was derived from newspapers, and it is important to know the biases and tendencies of one's sources of information. What follows here is an examination of what the editor of the Brant Review saw to be his role.

The Brant Review was bought by A.A. Allworth in 1880 and he owned it until July 1889, having taken on his brother as a partner in 1883.[82] He was a man of many opinions, one being an ardent dislike of labour unions.[83] The name of the paper frequently alternated between the Brant Review and the Paris Review, especially under later owners.[84]

The banner of the 10 November 1887 issue of the Paris Review reads, "An Independent Liberal Newspaper - of the People, by the People, for the People." Oddly, the paper was singled out by a trade journal called The Canadian Manufacturer as adopting a practice which was felt to be favourable to the interests of business:

> The Paris Review is the only newspaper in Canada that keep standing at the head of its editorial columns a brief description of the geography and business history of the town, its social advantages, and a more or less complete list of the leading manufacturing industries of the place. With a copy of the Review in hand, any one can, at a glance, learn who the leading manufacturers are and their respective lines of business. We wish that other local newspapers would adopt the same or similar methods of imparting such information concerning Canadian industrial establishments.[85]

The "brief description" referred to above reads in part as follows:

> The Town of Paris. Situated on the Grand Trunk Railway in the Garden of Ontario, is noted for the romantic scenery of its neighbourhood, its Mineral Waters, extensive Beds of Gypsum, and the best water power west of Toronto. For over fifty years it has been the headquarters of the land plaster business in Ontario, and is now the centre of the Canadian Knitted Goods Trade.
>
> Population, 4,000 . . . Enterprising Merchants, Leading Secret Societies, Taxation Low, Finest Gravity System of Waterworks on the Continent. Among the leading industries of the town are: Penman Manufacturing Co., Knitting Mills; Paris Manufacturing Co.; Paris Agricultural Works - D. Maxwell . . . [86]

The Brant Review was hardly an "independent liberal newspaper," and it only claimed to be one in order to gain credibility in the eyes of Parisian liberals. It was interested not in "the People" but in business, and for this reason received the sanction of The Canadian Manufacturer. Like hypocritical politicians, the Brant Review tried to be all things to all people, while in fact having a very definite conservative constituency. It was biased in favour of the local business coalition comprised of the political and economic elite. In the same 10 November 1887 issue quoted above is an editorial which stated what the Review saw to be the role of a town newspaper. Top priority was given to local boosterism, while no mention was made of the need to disseminate truthful news:

> The Review believes that a local paper can do much for its town in the way of advertising it abroad. It further believes that it owes the community in which it is supported to engage in this work, at all times and in every way within its power. Too often, alas, the valuable services the newspaper renders gratuitously are lost sight of entirely - its motives impugned, its intentions misconstrued and its public efforts suffered to lose in dignity and become impaired in usefulness. But that is not the fault of the newspaper; and the journal which rises superior to all adverse influences of this nature, bravely maintains its principles of local loyalty, and pursues its course of self-sacrificing devotion to the interests of the community, comes out all right in the end. More

> people should reflect that a newspaper is a public institution as well as a private enterprise.[87]

This editorial also espouses a role for citizens to play in municipal politics. It emphasizes that local businessmen are dependent on the town for their well-being and that those who reject the municipal growth ideology are primitive:

> The true citizen has the well being of his town at heart no less than his own private business. In most cases, the one is bound up with the other; but even where the man's business may be independent of the community, he is not, as a good citizen, thereby relieved of responsibility for the conduct of municipal affairs . . . . Men who pooh-pooh the idea of interest in municipal matters and profess contempt for municipal ambition are presumably in the mental condition of the coloured man who expressed a strong desire to leave the world and climb a tree.[88]

The Review was simply a mouthpiece for the local elite and their municipal schemes. It was uncritical and irresponsible in its attempt to lend legitimacy to the interests of privileged Parisians. The banner of the Brant Review of 14 January 1892 is a shameless confession of the newspaper's own moral code: "Hew to the line, let the chips falls where they may."

Editor Allworth was well aware of the notions of class differentiation and class struggle, and devoted much effort to ensuring that class consciousness did not develop, at least not within the lower classes. In the Brant Review of 21 November 1885, Editor Allworth reprinted a St. Thomas Times account of a sermon delivered in St. Thomas, Ontario by his father, Reverend W.H. Allworth. The sermon was titled, "Workingmen and their Wages," and was delivered to an assembly of the Knights of Labour at the Congregational Church. Editor Allworth wrote that "the sermon occupied over 3 columns of the Times," and that he had selected for the Review "from much that was valuable" a few portions of the full report in the Times, in the "public interest."[89] In his sermon, Rev. Allworth used rhetoric similar to that contained in the "trickle down" theory. He argued that the rich and poor have similar interests, if not the same interests. Cloaked as a sermon, this political propaganda sought to undermine both the organization of labour unions and the working class' accurate perception of class struggle. The Review's summary reads in part:

> It is not my purpose to appeal to your passions or your prejudices but to your judgements. You must not expect me to have to play the demagogue and set one class against another. That is not your friend who does so. The rich have rights as well as the poor and the employers have rights as well as the employees. Right wrongs no man. It is not then right to set one class against another, for all classes of society ought to be mutually beneficial to the other . . . One man may be the hand and another the foot, another the eye, another the brain, every part of the community is useful to every other part. Just as in the human body every member has its place, and one should not complain against the other . . . So it is in the body politic the members all of which are in a certain sense bound together by a common tie with an interdependence one on another. It will then not be our aim to set class against class . . .
>
> All kinds of honest labor is honorable. There is nothing really mean and low but sin. A laborer then only degrades himself when he steps down to defile himself with intemperance, licentiousness or any form of moral evil. Do not then working men be ashamed of your labor - you are by it doing service to your generation - but be ashamed of wrong. It is not mean to work, but it is mean to sin. A working man need not be ashamed to hold up his head and look anybody in the face, so long as he is sober, and honest, and if he will be reconsiled to his maker, he may look up to heaven and claim the greatest and best being in the universe as his friend and helper . . . [90]

4. WHO WOULD BENEFIT FROM WATERWORKS?

a. <u>The Geography of the Demand for Waterworks</u>

The waterworks scheme was primarily designed for the benefit of a particular social and spatial class of Paris society. The wealthy, who lived in Quality Hill, supported it while the dissenters were predominantly from the less prestigious upper town. D.A. Smith has written:

> As the conflict developed, it became more and more a struggle between Upper Town and Quality Hill. Wells had been dug north of Emily Street, but few had struck water. Wealthy men such as Baird, Whitlaw and the Caprons had to lay pipes from their homes to the springs on the bank above Riverview Park and pump water with hydraulic rams. This supply of water was not great enough to combat a big fire. Naturally these householders favored a water system; and perhaps they favored it too because it would enhance the value of vacant lots north of Banfield Street, some of which they owned.[91]

That there was a lack of water in North Ward and in the northern portion of Kings Ward is clear. The hill upon which the rich lived was not blessed with natural springs or productive wells. The poor residents on the hills of South Ward and Distillery Hill, though, had both. The greatest need, and therefore the greatest demand, for water was in the Kings and North Wards. Unfortunately the reservoir would have to be built in South Ward, since only there did high land

coincide with plentiful water. North Ward would thus be furthest from the reservoir, and since it was uphill from the valley of the Forks, would have the lowest pressure in town from the waterworks system. This situation was described by the Paris Waterworks Committee in 1881 as follows:

> Estimate No. 1 is to utilize the power in the spring situated on Mr. Pettit's farm, it having a fall of 30 feet and being 24 inches wide and some two inches deep, for the purpose of forcing water from said spring into a reservoir placed immediately behind the New Cemetery. The elevation thus obtained would give some 60 lbs. pressure throughout the upper town and lower town, at the station say 30 lbs.[92]

The Paris Transcript added in 1882:

> Nothing better than Scheme No. 1 could be desired for domestic purposes. The water is of a high degree of excellence, and can readily be conveyed to the highest portion of the town. For fire purposes also, the natural pressure would furnish force enough everywhere within the corporation excepting the upper part of North Ward; but even here the pressure would be some 20 pounds and this, together with the hand engine, the efficiency of which would be greatly increased, would meet all ordinary emergencies. This section of the town would thus be better protected against fire than it is at present, besides having what it so greatly needs, an abundant supply of wholesome water for domestic purposes.[93]

The variation within Paris in the need for water is evidenced in many newspaper articles. The Paris Transcript in 1882 wrote,

> Wingham and Tilsonburg, for instance, both much smaller places than Paris, have constructed water-works for fire purposes only, while Paris imperatively needs them both for protection against fire, and for the supply of domestic wants in important sections of the town.[94]

A letter to the editor of the Transcript, signed "North Ward," states the case plainly:

> . . . at present we have no water at all worth mentioning for fire protection . . . we are almost destitute of good drinking water of any kind. Some of the householders have expended as much as $200 and not got good water . . . Mr. Randall, Mr. Baird, Mr. Qua and Mr. Whitlaw have all gone to great expense fitting up artificial water supplies. But we all are not able to go to this expense . . . [95]

An editorial in the Brant Review of 18 May 1882 refuted the editor of the Paris Star, who had denied the need for waterworks:

> We would like the writer to explain how the majority of houses in North Ward and the northern part of Kings Ward is to be reached in case of fire. The fact

> is (and is so recognized) that buildings in this part of the town are utterly at the mercy of the devouring element.[96]

C.H. Roberts presented a petition to town council on 25 July 1881, asking that council not expend any further sums on steam-driven fire engines or engine houses until the feasibility of waterwork was explored. The petition reads:

> The undersigned Ratepayers humbly petition your honourable body, before incurring further expenditure in connection with our fire appliances to procure estimates for an efficient system of waterworks that would be satisfactory as a fire appliance and a supply of water for household use . . .[97]

The petition lists the signatories by ward. The results are as follows:

Ward	Number of Signatories	Percent of Total Signatories	Percent of Paris Total Voters
North	19	12.9	22.3
Kings	82	55.8	37.9
Queens	42	28.6	16.2
South	4	2.7	23.4
	147	100.0	99.8

It may be inferred that not all of these persons signed the petition because they actually wanted water service for their homes. The Paris Transcript tells us that one year later, in July 1882, only fifty persons had applied for water service.[98] D.A. Smith states that by 1884, there were "only 82 private users" of waterworks.[99] It is interesting to note that 68.7 percent of the signatories resided in the North and Kings Wards, while only 31.3 percent resided in upper town. Only four people from South Ward signed the petition.

b. Arguments Addressing the Need for Waterworks

Various justifications were offered by waterworks supporters for the creation of the Paris waterworks system. From the previous section, it is evident that fire protection and domestic water supplies were the two major needs expressed in Paris. Of these two the primary concern was with fire protection. According to D.A. Smith:

> . . . water-mains were originally laid in Paris not to improve comfort and health (neither of these, so far as the records show, was even mentioned during the discussions), but as a means of fighting fires and obtaining lower insurance-rates. Water was piped into the homes almost as an afterthought - as something incidental to the need for fire protection and to the development of fire-fighting techniques and equipment.[100]

The "discussions" of which Smith speaks were probably those of the waterworks committee and engineers, because there was some mention of domestic water usage during the public debate leading up to the bylaw vote in May 1882. However, Smith's insistence on the primacy of fire concerns is supported by the available evidence. Whenever multiple needs were listed in newspaper accounts, the need for fire protection usually was addressed first and received the most attention.[101] Further, as late as 13 July 1883, it was not known which residents were interested in receiving water service.[102] This was almost nine months after construction of the system began on 23 October 1882.[103] On 13 July 1883, C.H. Roberts asked, "who want water, for what purpose it is wanted and in what quantities."[104] Roberts had circulated an earlier survey in July 1882, but must have received an inconclusive or unsatisfactory response.

When explaining the proposed pattern of watermains at the public meeting of 12 May 1882, C.H. Roberts emphasized its ability to fight fires:

> The plan of laying the pipes proposed would cover the whole town with the aid of a few hundred feet of hose. He then gave a detailed statement of the course of the main, giving the streets and distances on the streets where it would go, and showed clearly that the town would be efficiently protected against fire.[105]

This is not to say that arguments concerning piped water for domestic use, and the related concern for public health, were non-existent. Engineer Bell wrote:

> Considering the supply of good water in a sanitary point of view, I might say that the advantages of having a continual supply of pure water cannot be overestimated. The intimate connection between the purity of the water supply and the health of cities and towns has come to universally recognized, and is no longer a debatable question, and medical men are unanimous in ascribing the occurrence of typhoid fever, dysentric epidemics, etc. in a great measure to the use of bad water. Their authority is founded upon a strictly legitimate inference from a legion of observations in which the relation between cause and effect has been ascertained beyond the possibility of a doubt.[106]

Whether Paris' wells in the early 1880s provided insufficient quantities of water, or water of poor quality, is unclear. It may be that the inconsistency of the facts can be explained by the variation across town. In any event, some people claimed that the situation was dire. One stated, "We have at present time among us a disease very much resembling Asiatic Cholera. We do not hear of neighbouring towns being thus afflicted. How do we know but it may be induced by our wells being contaminated . . . "[107]

Another added that "there was no doubt but that much of the sickness and fever prevalent throughout the town was attributable to this fact."[108] Others were unconvinced. The letter quoted earlier from "Workingman" stated that "most of us have wells of splendid water."[109] This claim of purity must have been widespread, as the Paris Waterworks Committee specifically addressed this contention with a counter argument:

> What do I want waterworks for? I have a good well and a cistern too. These are answers sometimes when the question is asked, how do you intend to vote on the waterworks bylaw? Some men are selfish enough to think only of self because their property may be located over an unfailing spring of good water, they care not for their neighbor who may not be this fortunate. These same individuals must not forget that any moment a source of impurity may drain into this otherwise pure water, and cause any one of those fearfully dangerous diseases among which may be named diptheria and typhoid fever. Because the water in their spring looks pure, is no reason why it really is pure.[110]

Suspicious by their absence were arguments relating to the use of water by the textile mills in Paris. They had a constant need for water in their production processes. Further, these processes resulted in the discharge of impure water into the raceways and rivers. This effluent may have adversely affected the quality of ground water in Paris, and thus also have affected the need of residents for alternative sources of water.

Newell and Greenhill have written that in typical North American cities of the mid-nineteenth century, "The increased use of water for industrial purposes contributed to the pollution created by cesspools and the absence of sewers, and at the same time added to the need for an ample as well as clean water supply."[111]

One would have to infer that this would have been the case in Paris. In textile mills, water was "indispensible for scouring, bleaching, printing, dyeing, and other processes of manufacture."[112] Cotton was "soured" in solutions of sulphuric acid and chlorine.[113] Wool was "scoured" by using detergents and steam to remove oil which was added at an earlier stage to facilitate spinning.[114] Scouring was a common practice in John Penman's textile mills in Paris. A bylaw passed in 1898 which provided Penman's mills with free water reads:

> That the Municipal Council . . . permit the said Company . . . the free use of such water from the said Municipal water works system for scouring and other industrial purposes in all their mills whenever and so long as the water from the river or rivers shall be unsuitable for such scouring and other industrial purposes.[115]

Also interesting is the fact that no arguments were made concerning the need for sewers. Paris would be without sewer service until a 265-foot-long section was installed on Grand River Street North in 1901.[116]

c. The Identity of Waterworks Supporters

To this point, it has been asserted that certain opposed arguments were made concerning waterworks development in Paris, and that there was an approximate spatial correlation between these two factions (Quality Hill versus Upper Town). In this section, an attempt will be made to identify groups within Paris society who asserted the pro-waterworks position. Little attempt will be made to identify the anti-waterworks groups due to an insufficiency of data.

While the possibility exists that there were no anti-waterworks groups, but only a handful of individuals, such is not likely. D.A. Smith notes that there were two public meetings on the waterworks issue.[117] Even one would have been superfluous if opposition had been slight. Further, as stated earlier, the meeting of 12 May 1882 lasted until 3:00 a.m. and was a raucous affair. This too implies significant opposition. The Paris Star would have been the best source for data concerning the anti-waterworks forces but, as stated earlier, C.H. Roberts chose few clippings from it to put in his scrapbook. Moreover, managers of Paris historical

documents did not see fit to preserve the Paris Star on microfilm, choosing instead, interestingly, the Brant Review.

At the political level, it has been noted that all members of town council except John Baker supported waterworks development in Paris in 1882. A late attempt to abort the particular scheme in October of that year was supported by Baker, fellow South Ward Councillor W.C. Jones, and Queens Ward Councillor Charles Arnold.[118] Jones became the owner of the Paris Star in 1883[119] while Arnold owned a large nursery.[120] John Baker was a shoe merchant on lot 7 on the east side of Grand River Street North.[121]

The pro-waterworks council members were as follows:

TABLE 4.3

PRO-WATERWORKS COUNCIL MEMBERS

Name	Council Position	Profession
James Hackland	Kings Ward Councillor	Knitting Mill Owner[122]
Frank Mitchell	Kings Ward Councillor	Grocer[123]
Robert Thomson	Reeve	Planing Mill Owner[124]
Joseph Schaffer	North Ward Councillor	Merchant[125]
Peter Adams	North Ward Councillor	Blacksmith[126]
A.H. Baird	North Ward Councillor	Miller Merchant[127]
Hugh Finlayson	Queens Ward Councillor	Tannery Owner and "eminent" businessman[128]
William Patterson	Queens Ward Councillor	Dentist[129]
John Arnold	Deputy Reeve	Nurseryman[130]
Ralph Tufford	South Ward Councillor	Gentleman[131]

Within economic groups, the class that owned real estate supported waterworks. This is evident not only from the result of the waterworks bylaw vote (for which only property owners were eligible), but also from other statements. Robert Montgomery, a dry goods merchant,[132] was reported to have said:

> He had taken the trouble to examine the town treasurer's books, and found that five large property holders will pay one-fourth of the whole assessment for waterworks, and all these men were heartily in favor of the By-law. One of these gentlemen, no longer than yesterday, had said that it was a grave consideration with him, seeing he must soon enlarge his premises, whether he ought not to remove to some other town where fire protection could be had.[133]

There were claims that waterworks development would increase the value of property in Paris "to the extent of 40 per cent."[134] Such a claim could not have been intended for tenants or aspiring owners to whom increased land costs would be an expense. However, individuals who already owned land, even if mortgaged, would be inclined to favourably view any development which resulted in a land value increase.

Other groups supported waterworks because they wanted to avail themselves of the new supply of water. In July 1882, "over 50 people" indicated that they wanted domestic water service.[135] This number is far smaller than the 202 who voted affirmatively on the issue just two months before. C.H. Roberts believed that the Grand Trunk Railroad would "need 60,000 gallons per day," and that water would also be used by "all the factories" and "about 100 private families."[136]

It was alleged that the mill owners and the town's merchants had a mutual concern for the development of waterworks:

> King's Ward is anxious for it, to protect their closely packed business places and factories, which are to a great extent dependent one on the other. In this way should the smallest of the factories burn, the employees - be they more or less - would be thrown out of employment, and a consequent reduction would be made in the amount of business along the street.[137]

d. The Equity of the Proposed Pattern of Water Provision

It is difficult to say with complete confidence where the installation of watermains was made in Paris during the initial construction period of 1882-4. The several newspaper descriptions of the pattern are slightly inconsistent. Even where they are consistent, later and more authoritative sources of information show that certain segments of the system as voted on in May 1882 were not in fact constructed as part of the initial phase. On the issue of the equity of this pattern of original installation, the result was predictable. Supporters of waterworks claimed the pattern was fair, while hindsight suggests that John Baker's general perception of "the inequities of the waterworks movement" was perhaps more valid.[138]

It was not disputed that the proposed plan would not service all areas of Paris equally Even the Paris Waterworks Committee conceded that "there is not a town or city in the Dominion where a pipe is laid in every street."[139] Instead, the mains would be situated in such a way as to, supposedly, protect all of the town from fire and to provide domestic water service only to those areas which wanted it: "The way in which the work is always done is to lay main pipes sufficient to protect the town or city against fire, and as other streets petition for water smaller pipes in proportion to the amount required."[140]

Thus, it was alleged that mains did not necessarily have to be placed on a street in order to protect that street from fire. At the public meeting of 12 May 1882, C.H. Roberts "showed clearly that the town would be efficiently protected against fire."[141] These mains would be placed on major streets and, according to Roberts: "If pipes had to be put on side streets for domestic uses the cost [of the system] would be increased and in cities a rate was charged that would cover the interest on the necessary outlay."[142]

Thus, those who lived on major streets would have the opportunity of subscribing for water service when the initial phase of construction ended in 1884. Further, these residents would not have to make any direct payment toward the cost of the installation of the original mains. The cost of these mains was paid by debenture borrowing, which was repaid by an increase in the rate of taxation imposed on all taxpayers in town.

However, residents of side streets would only be able to receive domestic service after petitioning council for the construction of new mains on their street. To be successful, the waterworks committee had to be of the opinion that the money received from the petitioners in the form of water subscription fees would equal or surpass seven percent of the financing costs incurred by the town for constructing that main.[143] It is unclear whether in fact the petitioners for new mains were required to make a direct payment in respect of the pipes over and above the sums they paid merely for a water subscription, but the legal provision to compel such a payment was present in a Paris bylaw from 1889:

> That all service pipes that may be required shall be constructed and laid down up to the outer line of the street by the Corporation [of the Town of Paris] and kept in repair by them, provided that there is a main water pipe in front of the premises, but if there be no main waterpipe on the street in front of the premises then special arrangements will be made by the Corporation or the Waterworks Committee thereof as to the proportion of the expense to be borne by the applicant.[144]

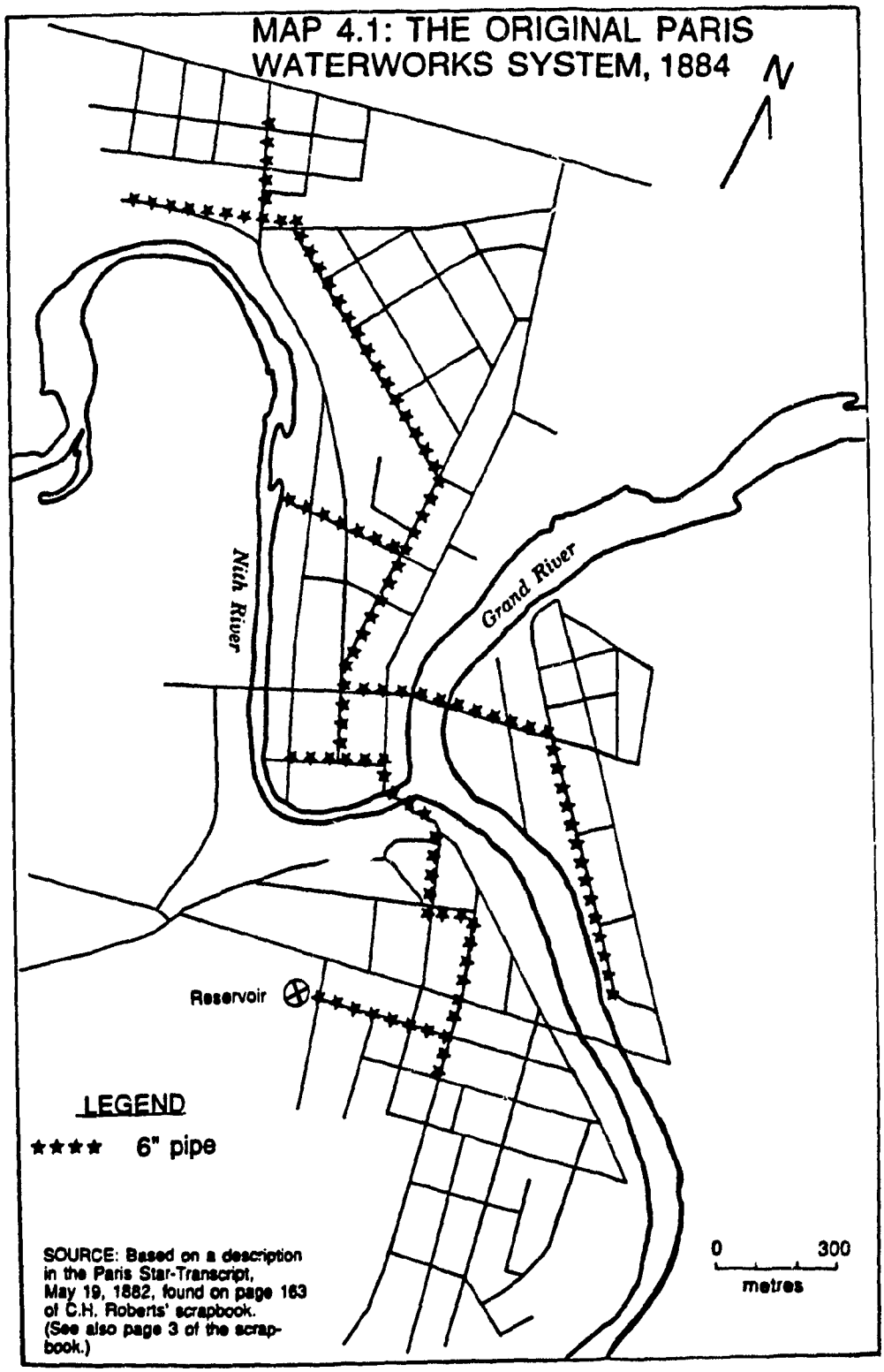
Provincial legislation enabled Ontario municipalities to enforce such provisions which treated waterworks extensions differently than original installations:

> Where water-works, for the benefit of a portion only of the municipality, are desired by the owners of any real property in any city, town, or incorporated village, the council, on the petition of the owners of the real property to be served, may pass by-laws for the construction of such water-works, and for assessing and levying upon such real property a special rate, sufficient to include a sinking fund for the repayment of debentures, which such council is hereby authorized to issue on the security of such rate, to provide funds for the construction of such water-works, and shall pass by-laws for so assessing and levying the same by an annual rate in the dollar on the said real property according to the frontage thereof, or according to the value thereof, exclusive of improvements, as may be desired by the petitioners.[145]

Such differential treatment was also evident in other Ontario municipalities. In 1901, for example, the Waterloo Water Commission decreed that "no extension of the main shall be made unless the annual revenue to be derived from consumers shall amount to ten per cent [of the cost of extension]."[146]

It was claimed by waterworks supporters that mains would be constructed "south along Burwell Street to Washington Street, thence along Washington Street to within about 200 feet of Mill Street."[147] The Paris Transcript stated emphatically that this main in South Ward "will not stop at the Roman Catholic church [Washington Street at Main Street] as stated by some of the chronic opponents of the scheme, who are seeking, by a policy of misrepresentation, to obtain votes against the By-law".[148]

The Transcript further claimed that South Ward would be serviced by an additional main on Grand River Street South "as far as Ball Street, or Queen Street, if not farther" south than that.[149] However, both claims were proven false, as when construction ended in 1884 neither main had been dug. (See Map 4.1 for the location of the original waterworks system.)


MAP 4.1: THE ORIGINAL PARIS WATERWORKS SYSTEM, 1884
N
Nith River
Grand River
Reservoir
LEGEND
★★★★ 6" pipe
SOURCE: Based on a description in the Paris Star-Transcript, May 19, 1882, found on page 163 of C.H. Roberts' scrapbook. (See also page 3 of the scrapbook.)
0
300
metres

Even as late as 1903, it was reported that "the southerly end of town has never had any fire protection; the system does not extend farther than two blocks south of Dundas Street, and therefore all that portion of the town south of Catherine Street is absolutely without fire protection."[150]

This quote proves several things. First, the main did in fact stop at the Roman Catholic church. Second, it was possible to protect from fire only those areas no further than one block away from a street with a water main. The editor of the Transcript stated that the main on Washington Street extended only two blocks south of Dundas, and that fire protection extended only as far as Catherine, which is three blocks south of Dundas. Third, both C.H. Roberts and the Brant Review misrepresented future events when, as quoted earlier, it was reported by the Review that at the public meeting of 12 May 1882, he "showed clearly that the town would be efficiently protected against fire."[151]

In fact, the South Ward received very little fire protection, and residents of other wards who lived more than one block away from a street which had a main received no protection. We know that at least some residents of South Ward wanted fire protection because on 4 May 1885, Town Council decided "that the petition from residents of South Ward for additional Fire Service Pipes be not at present entertained, our appropriation not allowing the additional expenditure."[152]

As for the main which was to be put on Grand River Street South "as far as Ball Street, or Queen Street, if not farther," it was decided by council, also on 4 May 1885, to extend the system "to Ball Street with two inch pipes" along Grand River Street South. Such a pipe would not have provided sufficient pressure for fire protection, which is why the editor of the Transcript may have written in 1903 that this area of town was vulnerable. Further, it is possible that, in spite of council's resolution, no such pipe was in fact installed along this segment, as the 1913 Goad Fire Insurance map shows no main of any size along this stretch, though there are mains present where Grand River Street intersects with Queen, Ball and Burwell Streets. (See Map

4.2 for the location of the waterworks system in 1913, and Map 4.3 for the location of the waterworks system in 1924.)

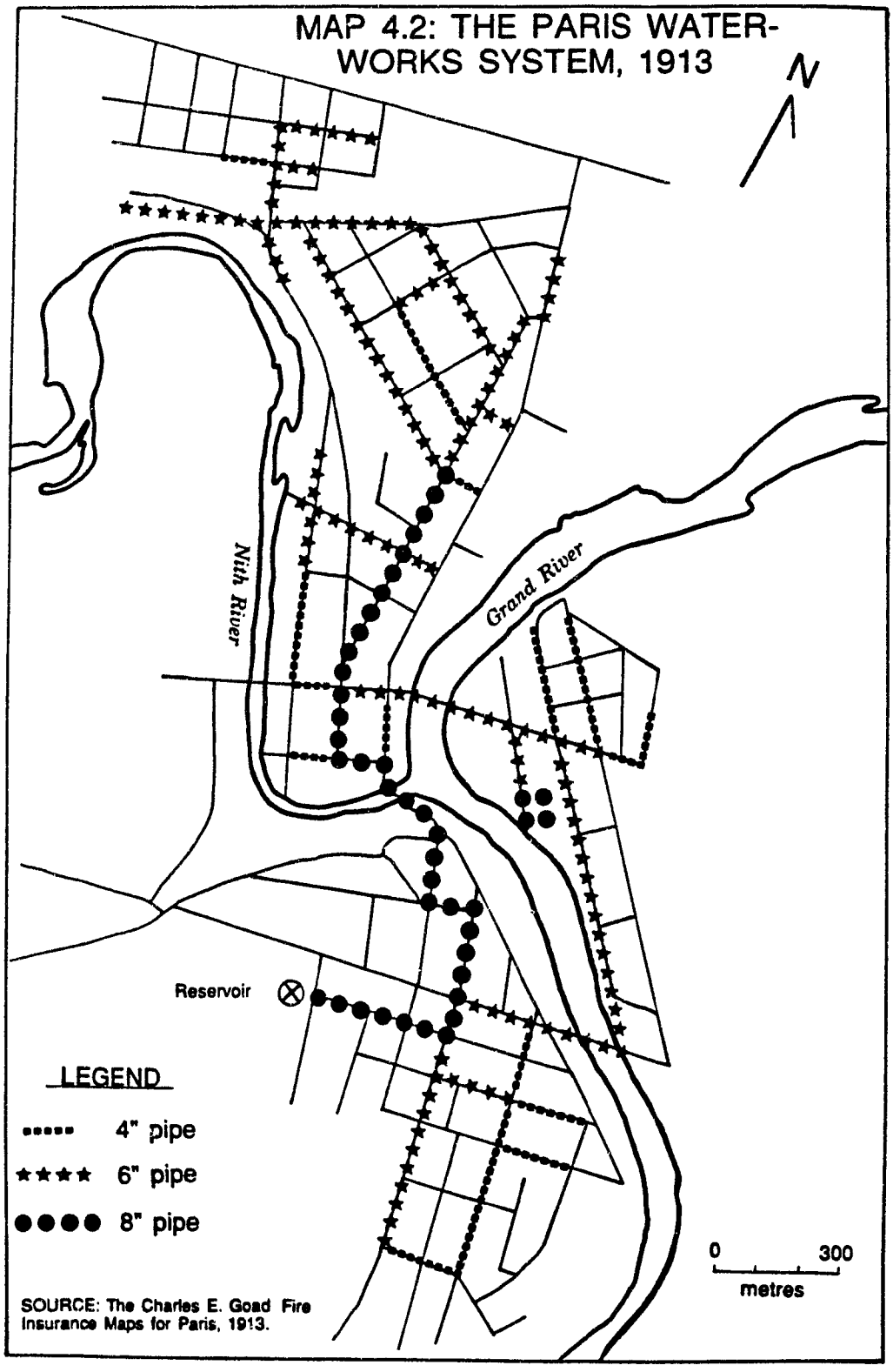
While the residents on side streets and in South Ward were being misled and poorly serviced, there is no evidence to suggest that promises were not kept regarding more important places in town. The Transcript stated that: "To reach West River Street, it can be relied upon that pipe of six inches in diameter will be laid on Emily Street and Mechanic Street as far as West River."[153]

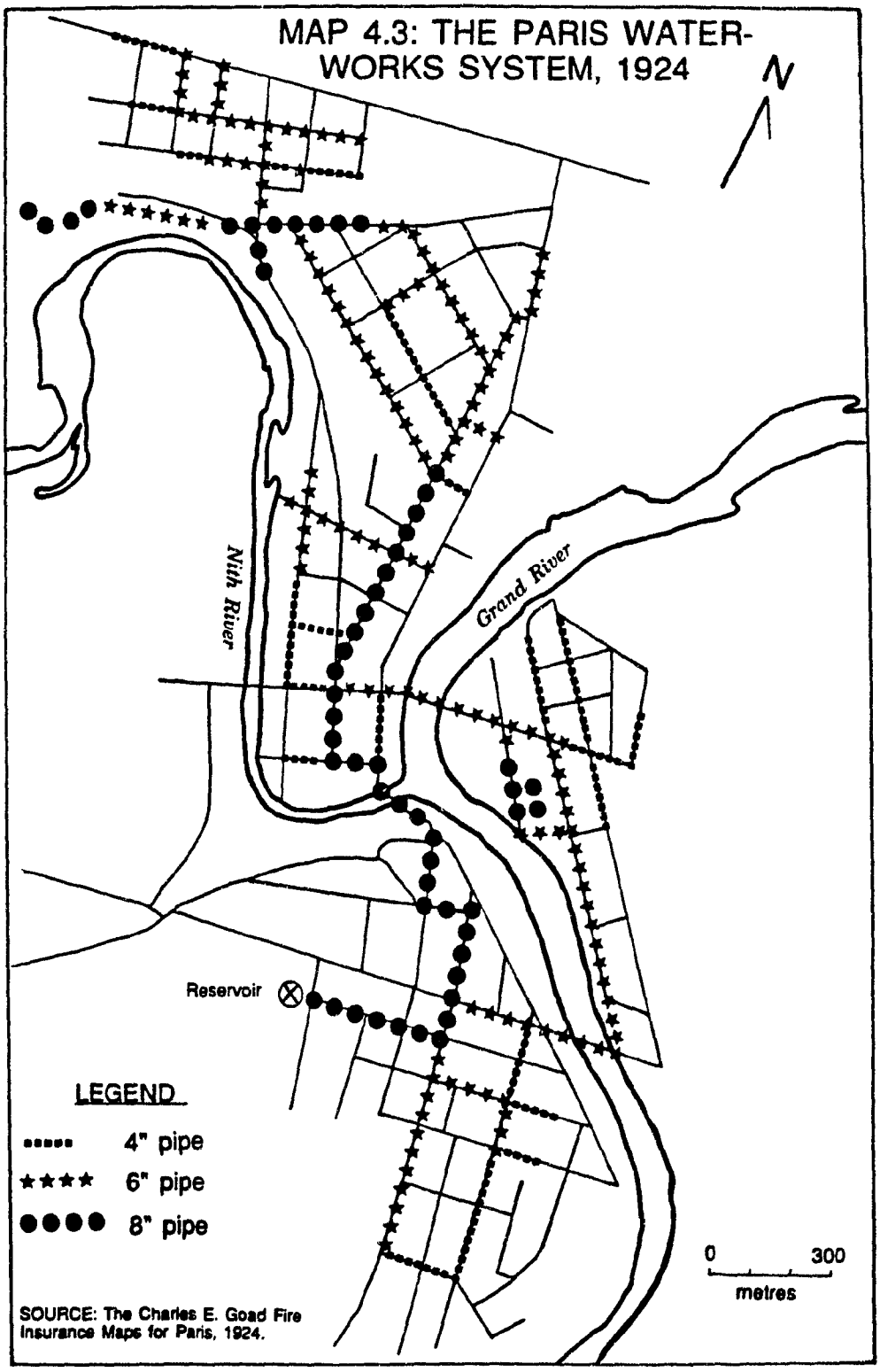
A Goad Fire Insurance map indicates that sometime prior to 1913, a six-inch pipe had been laid to the corner of Emily and West River, which was where Penman's number one mill was located. An eight-inch main had been installed along the east half of Mechanic Street and a four-inch main along the west half; in the middle of Mechanic Street was Crane and Baird's granary, which after 1889 became the Wincey textile mill.

The industries along the Willow Street raceway were also to be well serviced. The Paris Transcript states that a main would run east "across William Street bridge, and the whole length of Willow Street, immediately in front of our factories."[154]

This item was given top priority. In fact, the ceremonial turning of the first sod by C.H. Roberts occurred on William Street on 23 October 1882.[155] The Transcript stated that "laying the main across the Grand River is the first thing in order."[156] A second main would be laid across the Grand River at Dundas Street in 1899 to further service this district.[157]

Getting a water supply to the railroad junction at the western end of North Ward was also a priority. From the crossing over the Nith River at Grand River Street, there were four possible routes: through the "Slabtown" district of West River Street; along the somewhat more fashionable Broadway Street West; along affluent Broadway Street East; or along the very affluent Grand River Street North, which also constituted, between Mechanic and William Streets, the commercial core of the town. The intention originally was to lay the main northward from the Forks, "along Grand River Street . . . to William Street . . . down William


MAP 4.2: THE PARIS WATER-WORKS SYSTEM, 1913
N
Nith River
Grand River
Reservoir
LEGEND
4" pipe
6" pipe
8" pipe
0
300
metres
SOURCE: The Charles E. Goad Fire Insurance Maps for Paris, 1913.


MAP 4.3: THE PARIS WATER-WORKS SYSTEM, 1924
N
Nith River
Grand River
Reservoir
LEGEND
4" pipe
6" pipe
8" pipe
0
300
metres
SOURCE: The Charles E. Goad Fire Insurance Maps for Paris, 1924.

Street to Broadway Street West, along Broadway Street West to Broadway Street East, thence along Broadway Street East to Banfield Street . . . "[158]

The 1913 Goad Fire Insurance map, though, shows that the thickest main (eight inches) ran along Broadway Street, not Grand River Street, between Mechanic and William. The commercial core is instead serviced by a four-inch pipe. North of William, the plan to place the mains along Broadway Street East was adhered to. Once the Buffalo and Lake Huron Railroad was reached (atop Quality Hill) the original plan called for a main to be installed along "the whole length of Banfield."[159] The 1913 Goad map shows a six-inch service pipe along all of Banfield Street, with a hydrant at each intersection. This main then continued west to service the railroad junction. In short, given that a path had to be traced from point A (the Forks) to point B (the Junction), the path chosen was through an area of wealth.

e. The Equity of the Trickle Down Theory

It was conceded by both waterworks supporters and opponents that the waterworks scheme appealed directly to the interests of the more affluent members of Paris society. Where supporters and opponents differed was in their opinion of whether any other sector of society would receive indirect benefits. In this sense, waterworks supporters merged the interests of all Paris social classes into only one, that being the spatial class of the residents of Paris. In this way, the "trickle down" theory of benefit diffusion between social classes was buttressed by arguments relating to local dependence, and ultimately to local boosterism. Waterworks supporters maintained that all Paris residents had a vested interest in the welfare and progress of the town.

Waterworks was touted as a means of attracting investment from the wealthy, particularly in the form of industry. The Brant Review expressed these thoughts on the eve of the 1882 bylaw vote:

> Vote for waterworks and provide an efficient fire protection, that will induce more factories to come amongst us.

> Paris is a desirable location for men of means to reside in, one of the necessary requisites of a well appointed house is a bath-room and taps in every room. This cannot be had without waterworks. Vote for them and thus induce men of capital to reside with us.
>
> ENERGETIC FORESIGHT - Men do not invest where they cannot get protection from fire. Vote for waterworks and do away with this objection to our town.[160]

This equation of waterworks with the interests of industrialists was repeated at the public meeting of 12 May 1882. A.H. Baird, a local manufacturer, said that "the town should give all the inducements possible to manufacturers."[161] Robert Montgomery of Cameron, Montgomery & Co. Merchants[162] added that "it was important to retain all our industries and an effort should be made to satisfy the demands of manufacturers for fire protection."[163] Mr. Buckley of Buckley and Brockbank provided the link necessary for the trickle down theory when he said, ". . . he would like to see manufacturing industries encouraged in our midst, as we derived existence as a commercial town from them."[164]

The equation of the interests of the poor with the interests of the rich is plainly stated in a wildly pro-waterworks article which details a discussion between two fictional characters: "Mr. B. . . . the factories are the most valuable buildings in the town; and I just want to say without interrupting you that I think they ought to be well protected for there are a good many that would be pretty hard up were they destroyed."[165]

Having thus reconciled the rich with the poor in Paris, it then remained to channel animosity toward an amorphous, external threat to both. Fictional Mr. A. says: "Our town in the outside world has a bad name, it is said of us that we are 'slow and forsaken,' the adoption of a scheme of water works will lend us a prestige among our rival townsmen and redound to our honor as well as profit."[166]

The Brant Review called for some boosterism and civic unity:

> The prospects are certainly bright and it is only a question of time, and the creation of a little home enthusiasm, for our town to make rapid strides of advancement. Every one should encourage confidence in our future, and hasten as much as possible the spirit of enterprise now kept dormant by petty jealousies and sectional feeling.[167]

Waterworks, enterprise, and local boosterism are all neatly equated in this letter to the editor of the Brant Review signed "Progress":

> Are we always to be behind, are we always to have it said that our town is 'old fogy,' 'slow,' 'dull,' 'foresaken,' wanting in enterprise, &c, &c? Such things are said and the same persons that say them also say that a nicer location, finer scenery, and a more desirable location for making a home cannot be found in Canada if it only had some enterprise about it and was really alive. Can we not make it so? Let us take the first step by adopting a system of waterworks.[168]

It was not just the impact of a completed waterworks system which gave rise to "trickle down" arguments, but even the construction process itself. In this letter to the editor, it is argued that money spent in Paris on waterworks would trickle down to the common man:

> One point has been over looked in considering the cost of water works, and that is the large share of the money to be expended which will be expended right in our midst and which the laboring man who pays taxes will have returned to his own pocket. This should not be lost sight of, as it is of great importance to know that expenditure most judicious as it undoubtedly is, is not going to be made outside of our town.[169]

Waterworks opponents denied the validity of the solitary spatial class theory inherent in trickle down ideology. Those such as "Workingman," quoted earlier, emphasized a class system with no monetary leaks trickling down:

> . . . of what use will waterworks be to the generality of the workingmen in Paris. In what single point will the poor man be benefitted. Our taxes will be higher, without adequate compensation in the way of greater conveniences or improvements in which we can participate . . . The waterworks scheme would seem to be a plan for taxing the workingman for the benefit of a few manufacturers and store keepers.[170]

5. TECHNICAL ISSUES AND THE FEASIBILITY OF THE WATERWORKS SCHEME

Various representations were made during the waterworks debate concerning the capabilities of waterworks systems in general, and also the suitability of the particular scheme which was planned for Paris. The major issue concerned whether the natural pressure of the springs in South Ward would be sufficient to fill the reservoir or whether costly dams and pumphouses would be required. Other issues concerned whether the quantity of water derived from the springs would be sufficient for the town's needs; whether additional pumping stations

would have to be built along the system below the reservoir in order to create a pressure sufficient for fire fighting; whether the system would eliminate the need for portable fire-fighting equipment; whether the water in the reservoir would stay pure; and whether, in view of these uncertainties, the cost projections of the scheme were realistic.

a. Debate Concerning the Need to Power the Waterworks System

The system of waterworks Paris chose was called the "gravity" system. It was called this because it was a system which worked on the principle that "water will find its level."[171] No power needed to be added to the system, in theory, to make it work, and thus the annual operating costs were supposed to be nil. According to the Paris Transcript,

> The proposal is to derive the water supply from the spring on Mr. Pettit's farm, and to raise it, by means of a water-wheel, to a reservoir constructed on the crest of the hill behind the new cemetery, whence it can be distributed through the town without any other force than its own weight . . . It is noticeable that there would be little or no annual expense incurred for power in connection with this scheme.[172]

The "water-wheel" was actually "a system of rams at the spring."[173] A hydraulic ram is a specially constructed chamber with slanted tunnels leading to and from it, wherein the fluid character of water is used to elevate water without external power. Quite a lot of theory concerning the principles of physics at work in a water ram existed in 1880,[174] and in one published text it was stated that a hydraulic ram, "when properly set will deliver about one-seventh of the water used to an elevation 10 times as great as the fall from the source of supply to the ram, one-fourteenth of the water used to a height 20 times as great as the fall, and so on in that proportion."[175]

It appears that only in rare circumstances could more than one-seventh of the total water employed in the system be elevated to a reservoir from the source of supply. This one-seventh figure was often mentioned in the debates in Paris concerning the feasibility of the gravity system. Two other schemes were also considered, both of which operated on a system of "direct pressure" derived from "powerful steam hydraulic engines."[176] The estimated annual

costs for fuelling schemes No. 2 and 3 were $1,200 and $1,410 respectively.[177] Accordingly,

> The opinion prevails throughout the town that the annual cost attached to Nos. 2 and 3 would be a great drawback, and that a number of votes would be influenced by it detrimental to the carrying of it out . . . Mr. Ware [a civil engineer] stated however, that there was no system equal to No. 1 or gravity, where it was practicable . . . [178]

Thus, the idea of scheme No. 1 was felt to be easier to sell to the masses of voters due to its lack of ongoing expense. The only problem left was to convince the townspeople that, in Paris, the scheme would be practicable. Perhaps the search for waterworks data was conducted in the same way as was the search for data concerning the unharnessed waterpower for milling purposes from the rivers. In that regard, the Paris Transcript reported in 1882:

> On Friday evening last a meeting was held for the purpose of hearing the report on all the waterpower available near our town. This report was prepared after careful and accurate surveys, levels and estimates had been made by Mr. J.A. Bell of St. Thomas - a few of our more enterprising merchants bearing the whole expense . . . A private letter was first read stating that the utmost care had been taken to make the estimates correct, and further that they could be relied on as a very close approximation, quite as correct as could be got, without going to great expense - an expense in fact quite needless at present.[179]

Eventually the conclusion was reached that Paris was ideally suited not only for waterworks, but also for the gravity system in particular:

> Paris has two advantages over London: First - an abundant supply of the best water imaginable, ready for us, without boring for it; and second, we have waterpower in any quantity required; instead of having to expend large sums annually in maintaining an engineer, and providing coal, wood, &c. Peterborough is expending at the present moment $50,000 in constructing waterworks. That town has also adopted the Holly system, or direct pressure, instead of the gravity system, which all engineers consider the best, nature not having given Peterborough the advantages possessed by Paris, where the latter system may be easily provided.[180]

The Paris Waterworks Committee wrote in 1881:

> In Paris, we have no obstacles to overcome. Nature has placed all we need within half a mile of our corporation limits. Why not take advantage of it, and profit by it? Numerous instances could be cited where towns and cities have to pay enormous sums for a sufficient supply of pure water. Thanks to nature's bounties Paris is not one of them. I do not suppose there is a town in Canada where as bountiful a supply can be supplied at as low a cost.[181]

But a year previous, in 1881, there had been admissions that additional power might have to be added to the system. Of Mr. Ware, the first engineer to study the Paris project, it was reported that: "In reply to a question by Mr. Baird he stated it would be difficult to say which would be the best means of forcing water to the reservoir from the spring, steam or waterpower. Steam had been found equally economical with waterpower in most circumstances."[182]

Mr. Ware was eventually replaced by Mr. J.A. Bell as the consulting engineer for the project. Bell himself would resign from the project in May 1883, before its completion. In an important letter dated 3 May 1882 which Bell sent to C.H. Roberts, Bell writes:

> I certainly think it is the best system to take, but there is one thing I must give you to understand so as not to mislead you in future, do not expect to derive sufficient power from the springs themselves to fill the reservoir. They will not do it. You can by damming up Smith's Creek get the power, or you may be steam, but I am perfectly certain that there is not sufficient power in the springs to do it. Suppose you did use them as the motive power, you could only expect to raise about 1/7 of the water to that height . . . and this would not be sufficient.[183]

It was certainly odd, therefore, that in August 1882 the Brant Review would write:

> Mr. Bell thought that the best plan for the town to adopt at present would be a system of rams at the spring, which he says would give water enough for this town for years, and when the supply is not large enough, another system could be adopted with very little loss, if any.[184]

John Kay put forward the anti-waterworks view very clearly at the public meeting of 12 May 1882. According to the Brant Review,

> John Kay said that only one-sixth of the water in the spring could be raised by its own power. This would give only 17 gallons a head . . . The creek would have to be dammed, and how did they know the expense of building such a dam as would withstand our spring floods . . . The $30,000 meant $60,000 and the revenue would be eaten up by running expenses.[185]

C.H. Roberts, for his part, was at this meeting, and the report of what he said is as follows:

> The stream was 2-3/8" deep, 2 feet wide and 35 feet fall and even with a ram as at first proposed, would be sufficient to supply Paris for years to come . . . . Messrs. Merril, Ware and Bell had made independent examinations of Pettit's spring and each said the water was sufficient for our purposes.[186]

On the issue of the feasibility of the ram system, opinion was also somewhat divided on town council and in the local newspapers. At the council meeting of 24 April 1882, John Baker "did not know that a ram, or rams, could supply the town with all the water it would want."[187] Queens Ward Councillor William Patterson countered with, "The engineer has given us his estimates. They prove most positively that an ample supply of water will be obtained; and indeed, another engineer who has been in town and gone over the ground is about to report most favorably on it."[188]

Fellow Queens Ward Councillor Charles Arnold said he "thought the engineers did not know everything."[189] And at a council meeting on 30 October 1882, South Ward Councillor W.C. Jones said that "he considered the scheme unsatisfactory. He had no faith in the hydraulic rams."[190]

Dissent among the newspapers was evident in 1881 when the Brant Review wrote:

> The Transcript says we told you so, some time ago 'that spring' would not have sufficient power to supply the town with water; well perhaps not, perhaps there is a man we may safely say there is not an individual less than a man, who can drink or use over 40 gallons of water daily.[191]

This issue of the sufficiency of the water from Pettit's spring is related to the issue of the rams, since it was agreed that only one-sixth or one-seventh of the water from the spring would be raised by the rams to the reservoir. The point which waterworks supporters and opponents differed on was whether this fractional flow was sufficient for the town's purposes. Relying on engineer Ware's calculation, the Brant Review stated in 1881 that:

> The total amount of water per day which is now running to waste at the spring spoken of is 967,680 gallons . . . Mr. Ware says it will take five-sixths of this amount to force the one-sixth into the reservoir back of the New Cemetery; this one-sixth he reports will be 161,280 gallons . . . [192]

The claim that there would be over 40 gallons of water available per person per day in Paris was then derived by dividing this sum of 161,280 gallons by the then population of just over 3,000 people, while elsewhere the more arithmetically correct figure of 50 gallons per head

was derived.[193] In May 1882, just before the waterworks bylaw vote, the claim of 100 gallons per head per day was voiced by the Transcript.[194]

These estimates of the amount of water available in Paris were placed in the context of other municipalities in Canada and Britain, and the issue of sufficiency was addressed on the basis of these comparisons. In May 1882, for example, the Paris Transcript wrote that the average consumption "in other cities and towns is, at an outside figure, 30 gallons" per head per day.[195] (An article in the 23 June 1883 edition of the Engineering News and American Contract Record states, "The average daily consumption of water in towns is 16 to 20 gallons per head.") The Transcript article added that engineer Bell "stated positively that Pettit's spring is as large in volume as the whole of the springs which supply the city of London [Ontario] waterworks."[196]

In June 1882, the Paris Transcript printed a letter from engineer Bell in which he lists these consumption figures for various British cities.

TABLE 4.4

CONSUMPTION OF WATER IN SELECTED BRITISH CITIES

City	Consumption Per Head Per Day		
	Domestic	Trade and General	Total
Liverpool	21.5	2.6	24.1
Manchester	14.0	7.0	21.0
Leeds	18.5	4.5	23.0
Edinburgh	30.0	6.0	36.0
Newcastle	21.0	7.0	28.0
Sunderland	13.0	6.5	19.5
Nottingham	13.0	5.5	18.5
Bristol	16.6	2.0	18.6
Preston	10.8	3.2	14.0
Norwich	15.0	5.0	20.0
Cambridge	26.0	3.0	29.0

Source: The Paris Transcript, June 1882, in C.H. Roberts' scrapbook, 259.

Bell's letter concluded: "You will see by the above that scheme No. 1 you would have sufficient water for a city of 20,000 by using the whole of the water."[197] Based on this, the Transcript then concluded: "It is clear then that one seventh of the amount of water in Pettit's spring would be sufficient for the Town of Paris, as its population is just about one seventh of 20,000."[198]

The validity of the conclusion that the volume of water at the spring, or rather one-seventh of it, was sufficient depended on the similarity of Paris' needs with those of major British cities. However, it was reported in July 1883 that the Grand Trunk Railroad would require 60,000 gallons of water a day at Paris Station.[199] This equalled about 20 gallons per head per day, an amount which alone exceeded the per capita consumption figures for Sunderland, Nottingham, Bristol, and Preston. By 1915, the Grand Trunk would be using 330,000 gallons of water per day from the Paris waterworks.[200] With a population of 4,370, the railroad's consumption alone equalled 75.5 gallons per head per day. Nonetheless, the Transcript claimed just before the waterworks vote that "engineers Ware and Bell of St. Thomas, Kennedy of Hamilton, and Merril of Picton state positively that the spring supplies enough water for a town three times the size of Paris."[201] It was left to the readers' imaginations as to whether this reference was to the total volume of water in the spring or merely the one-seventh of it which would be available through the hydraulic ram system of scheme No. 1.

It was a little over one year after the waterworks bylaw vote that the arguments of waterworks supporters were proven false. When engineer Bell resigned suddenly from the project in May of 1883, the Brant Review attempted to cast him as a scapegoat for the additional expenses caused by the failure of the rams and the resulting need to use steam power to fill the reservoir with water:

> An expert with the Rumsey Ram Manufactory has been in town several days this week, with the object of making the rams throw water to the reservoir, as engineer Bell said they would. His endeavours thus far have been a failure, and now it looks very much as though the ram system would have to be

> abandoned. This may explain engineer Bell's anxiety to resign his position here and get his money . . . probably a turbine wheel will be substituted for the rams . . . [202]

It is interesting to note, though, that the ensuing argument between Mr. Bell and town council over his fees was resolved with the council deciding to pay him in full.

In its 28 June 1883 edition, the Brant Review, without naming Kay, conceded that he had spoken truly at the public meeting of the year before:

> It begins to look as though the gloomy prophet was not altogether wrong in regard to waterworks when he prophesied that the cost would be nearer $60,000 than $30,000. The ram system recommended by engineer Bell of St. Thomas has proved a complete failure, and the expert from Rumsey and Co's establishment has gone back without improving matters. The rams will not throw water into the reservoir, and even could they be made to do so, it would be little better than a dribble. There is not sufficient power in the spring is the verdict. [emphasis added] The waterworks committee is now divided as to what course to take . . . Some now advocate a steam pump; this would involve an outlay of $4,000 to $5,000 and yearly expenses of $1,200 or $1,500.

The need for power in the waterworks system was applicable not only to the problem of getting water up to the reservoir from the spring, but also to the problem of getting water distributed throughout the mains at a pressure sufficient to provide fire protection. In this regard, it was known that the gravity system of water distribution would provide lower pressure in the North Ward, which was uphill from the valley of the Forks. Engineer Bell was not daunted, however, as neither he nor anyone else indicated that expensive corrective measures would have to be taken:

> . . . to supply the water by gravitation, without too great an expenditure, it is certainly desirable that that should be the system decided upon. This, I believe, nature has provided you with - sufficient to give a pressure of 30 lbs. per square inch at the railway station, the highest portion in your town, and although this is not quite as great a pressure as would be desired, it still is sufficient for all ordinary occasions, as there could be thrown one or more streams from it to a vertical height of twenty feet . . . [203]

However, as time passed remedial action became more important. The minutes of the Paris Water and Light Commission for 14 January 1909 read: "Discussion on the best means to increase the water pressure of the high levels and decided to wait until the Board of Trade had received a report from their inquiry."

On 29 September 1909, town council passed bylaw #538, which raised by debenture $5,000 "to procure a better water pressure at Paris Junction and the higher levels in town." By 1909 the provincial law regarding bylaw authorization had been changed, replacing the assent of ratepayers with the consent of the Ontario Railway and Municipal Board. The $5,000 was probably spent on the electric booster pump which is described in a Charles E. Goad fire insurance map of Paris for 1913 as being capable of pumping 750 gallons of water per minute. This pump provided the district north of the Grand Trunk Railroad station with a direct pressure of 100 pounds, while the rest of the town continued to receive 80 pounds of pressure from the gravitation system.

b. The Need to Retain Mobile Fire Engines

Before the waterworks bylaw was authorized by the ratepayers of Paris in May 1882, there had been much discussion concerning the utility of waterworks for fire prevention. Waterworks supporters boasted that a waterworks system would provide complete fire protection by itself, with only the need for a portable "hose cart" to be attached to the hydrants.[204] Waterworks opponents seemed to favour the construction of an engine house for a mobile fire engine, to be located in the upper town or nowhere at all. The two issues of waterworks and fire engines were originally posed as alternatives, but in the end both methods of fire fighting were employed.

The waterworks scheme was originally an alternative to fire engines. At a council meeting in Paris on 9 May 1877, Mr. Hall said, "If a system of water-works was proposed, we would not need an engine."[205] The issue assumed a spatial pattern, as the councillors of North and Kings Wards opposed the councillors of South and Queens Wards:

> Is it not very unfortunate that the gentlemen we send to the Town Council cannot be found to possess sufficient patriotism or public spirit to lay aside personal spite, as well as sectional feeling, and legislate for the public weal? I allude, Sir, to the question now so prominently before the people - Fire Engine Hall vs. Waterworks. Councillors for North and Kings Wards cannot for a moment believe that the representatives of Queens and South Wards are

> endowed with intelligence to see that waterworks even at an expenditure of $25,000 are preferable to an engine steamer... [206]

The upper town councillors supported the engine house option, but only if it would be built in the upper town:

> If I remember aright, the engine house scheme was supported to the extent of $2,000, by the gentlemen who now so strenuously oppose the same, while there was a prospect of the building being erected in Queens Ward. But immediately upon the site being chosen in Kings Ward, the whole thing is severely condemned.[207]

It was because of this strong polarization of views that waterworks supporters sought to separate the two issues and have them dealt with independently. A letter to the editor of the Brant Review, signed "A Supporters of Waterworks," states:

> The engine house question again is now a dead letter, as far as public opinion goes. Waterworks, I judge from what we can hear, is one of the most popular enterprises the town has ever considered. Why not let it stand or fall on its own merits? Why mix the two questions? Public opinion has expressed itself most vigorously on the engine house scheme and adversely.[208]

Queens Ward councillor Hugh Finlayson agreed with the separation:

> He considered it would be unwise to couple anything else with the Waterworks By-Law as there are many who would vote for Waterworks who would not vote for an engine house, and in consequence we would get nothing. The By-Law would be lost.[209]

In May 1882 when the waterworks bylaw was voted on, it dealt solely with waterworks. However, the issue of the fire engine was not over. In 1884, numerous technical problems plagued the still unfinished waterworks system. The limitations of the scheme had become apparent, especially to fire insurance agents:

> The mayor remarked that he had been informed by the representative of an insurance company who had seen our reservoir, that so soon as the waterworks were completed and in an efficient condition the town would be ranked in the C list instead of D, as at present, if we retained the engine we might be marked as B.[210]

The fire engine was retained at least until 1887, as the Paris Review wrote on 10 November that the mayor "did not think it would be wise to sell the engine. The waterworks

system was not complete and at any hour a great loss might result in the absence of the steam fire engine."[211]

The Charles E. Goad fire insurance map for Paris in 1913 lists among the town's fire-fighting appliances a steam fire engine, and a hook and ladder truck.

c. The Actual Cost of the Waterworks Scheme

The actual cost of the Paris waterworks scheme far exceeded the estimate of $30,000 which formed the basis of the 1882 debenture. This cost overrun resulted from negligent or intentional misrepresentations as to the system's feasibility and capability. As time passed it became apparent that the scheme had been poorly planned, engineered and constructed. Further expense was incurred when, within twenty years, much of the pumphouse equipment was outdated or obsolete, necessitating a costly conversion to electricity from coal power. There was also a large expansion of the watermain network to include sizeable areas which were unserviced at the time of the system's initial construction.

Early estimates of the cost of the waterworks system ranged "from $10,000 to $25,000."[212] Notes in the preface of C.H. Roberts' scrapbook, and in a letter to the editor of the Paris Transcript signed "Parisian," place the figure at $15,500.[213] In May 1882, when Paris bylaw #208 was submitted for voter approval, $30,000 worth of debt was to be incurred for waterworks. Skeptics such as John Kay said the final cost would be $60,000,[214] while South Ward councillor John Baker said "the cost would be greater than the estimates."[215] The eventual failure of the water rams to fill the reservoir substantially increased the actual cost of the project, as did other problems, but even before these deficiencies manifested themselves several councillors were certain of a financial fiasco. On 16 October 1882, one week before the ceremonial turning of the first sod, tenders for the construction of the waterworks were received by council. From the range of estimates, three councillors suspected that the $30,000 figure was unrealistic. South Ward councillor W.C. Jones moved, seconded by Queens Ward councillor Charles Arnold, and supported by South Ward councillor John Baker,

> That the report of the committee of the whole on the report of the Waterworks Committee be not adopted but referred to said Committee to report that they find it impossible to put in a proper system of waterworks for the amount of the by-law granted and to recommend submitting a by-law before the people for a larger amount.[216]

These three were outvoted by ten other council members, who then decided to hire the firm of Blackmore and Co. of St. Thomas, which had submitted a tender of $29,213.

Aside from the failure of the hydraulic rams to fill the reservoir, numerous other problems plagued the system, driving the cost beyond the tendered sum. On 25 February 1884, Charles Whitlaw, chairman of the waterworks committee, told council that the cost of the work to date was $31,448, plus an additional $900 which was being disputed.[217] Yet Whitlaw explained that the work was not yet close to completed:

> The Reservoir has been filled three times with the pump at a cost of $184, but leaks in the pipes, etc., have absorbed the water until on the 19th only about 18" remained. Instructions have been given to have the reservoir filled again when the water will be shut off from the pipes until the weather admits of their being fully tested . . . The valve chambers are too small as at present constructed. Your committee do not consider the contract completed as yet, the whole works being unsatisfactory.[218]

Councillor Thomas Evans claimed that the expense at this time was even higher:

> $35,000 had been expended and yet there was no waterworks system. Everything was incomplete. The reservoir was cracked, one member had said the pipes were laid as crooked as a dog's hind leg, and they leaked to such an extent that when the reservoir was filled it was soon empty again.[219]

In 1897, the Manual of American Waterworks wrote that the total cost of the Paris waterworks system was $55,118, with outstanding debentures totalling $34,977.[220] In 1902, the Municipal World wrote that the cost was $57,195.05, that $45,000 worth of debentures had been issued for waterworks, and that $13,500 was still outstanding.[221] It added that:

> The pumping station is located at the springs on a shelf in the bank or cliff from which the springs appear . . . The building itself is by no means a model, being a wooden structure sheeted over with tin, all very much the worse for wear, and too small to properly accommodate the plant. While no doubt an evidence of the enterprise of Paris in being one of the first towns of the Province to install a public system of water supply, and as such suited to the time of construction, it is now a relic.

After the initial outlay of $30,000, a further $8,000 of debenture debt was incurred by bylaw #229 in 1884 in order to "complete" the system. In 1889, bylaw #298 raised another $5,000 for the "extension and improvement" of the waterworks. Of this sum, $700 was spent on a boiler, $1,300 was spent on the pumphouse, and $3,000 was spent on pipes and pipelines. In 1899, bylaw #393 raised $2,000 "to purchase and lay 6-inch main from corner Dundas and Burwell Streets across Dundas Street Bridge."[222] These amounts add up to the $45,000 figure given by the Municipal World, which also stated that an additional amount of $12,195 was expended "on capital account" from sources other than debenture borrowing.[223]

After the turn of the century, further capital expenditures were made on waterworks. In 1903, bylaw #460 raised $15,000 for waterworks. Of this amount, $5,000 was spent on service extensions in the North and South Wards; $5,000 was spent on replacing the six-inch pipe between the pumphouse and the reservoir with a ten-inch one; and $5,000 was spent on an electric motor and poles and wires, as at this time the old coal-fired pumps were replaced.

d. A Conspiracy Theory

Evidence exists of a number of unusual circumstances and coincidences which may lead one to believe that there was a secret agenda behind the actions of many waterworks supporters. The waterworks committee conducted its business behind a veil of secrecy; the tendering process employed by council produced only two complete tenders; two engineers from St. Thomas mysteriously abandoned the project; the majority of councillors showed a great reluctance to consult any expert, impartial engineers; the construction company hired was also from St. Thomas; one of the engineers was quoted in the local papers as stating the exact opposite of what he stated in a private letter; and in spite of all the failings by the main engineer and the construction company, both were paid in full. From all of the above, it appears as if waterworks supporters like C.H. Roberts who held no civic office coordinated their actions with certain members of town council, and with the Paris waterworks committee, and

with the "opinions" expressed by engineers, and with the construction company which was granted the contract.

C.H. Roberts began his waterworks research in 1881 by establishing contact with engineer Ware of St. Thomas.[224] In April 1882, engineer Bell, also of St. Thomas, became the "successor to Mr. Ware" as C.H. Roberts' consultant.[225] When the waterworks bylaw was passed in May 1882, council debated as to who the town should retain as its engineer for the project. At a council meeting in July 1882, Reeve Thompson "suggested getting a first-class engineer from Ottawa, London or Hamilton."[226] Queens Ward councillor Patterson's reply was as follows:

> Mr. Patterson thought we had plans that would do without going to the expense of getting engineers from Ottawa and other places to make new surveys. If we engaged one of these men he would only send an assistant to do the work. We were more likely to have the work thoroughly and satisfactorily done by the St. Thomas men, as their reputation was at stake in the matter, Mr. Ware having guaranteed the success of the plan.[227]

The issue was not resolved until an August 1882 council meeting, when:

> A long discussion ensued, when the advisability of employing another engineer was urged by several of the councillors, on the ground that the fullest investigation should be made, and two heads were better than one . . . On motion the committee rose and reported in favour of instructing Mr. Bell to examine and report a plan for conducting the water of Pettit's spring into Paris . . .[228]

Engineer Bell stated clearly in his letter of 3 May 1882 to C.H. Roberts that he was "perfectly certain that there is not sufficient power in the springs" to drive a water ram, and that he wanted Roberts to know this so "as not to mislead you in future."[229] Yet the Brant Review wrote in June 1883 that the rams would not throw water to the reservoir, even though "Engineer Bell said they would."[230] Engineer Bell probably said a lot of things which conflicted with his better professional judgment. A letter he sent to C.H. Roberts dated 21 April 1882 proves that Bell consciously presented an overly-optimistic opinion on the Paris waterworks scheme. It also reveals the calculated use that Bell and Roberts made of letters to the local newspaper editors:

> I would like very well to come and attend your meeting on Monday Eve, but I am very much afraid that I cannot do so . . . Anyway it may be just as well for me not to appear publicly on the scene for a little while yet. I will write you a letter stating my views on the systems, as soon as I get through with my present work and will put it in as favourable light as I can. This you can publish if you see fit. I could address it to one of the Editors if you thought it best, but I think it would be just as well to send it to you.[231]

Bell's letter of resignation was received by town council at their meeting of 7 May 1883,[232] and on 3 July 1883 engineer Lavery was hired to take his place.[233] The dispute between Bell and council concerning his wages was resolved with council paying him in full.

The construction firm of Blackmore and Company was paid in full on 2 June 1884 when the waterworks system tested "fine."[234] Blackmore had been the only company to submit a tender under the $30,000 figure which was authorized by the ratepayers.[235] Nicholson and King of St. Catharines submitted a tender for $33,149, while five other firms tendered on only portions of the work required. Since the figures quoted by these five firms exceeded the figures of the other two companies on the portions described, council did not seek completed tenders from these companies. This reasoning may have been faulty, as economies of scale might have made tenders for the whole system less expensive than the sum of its parts.

The actions of the waterworks committee drew criticism from some members of council. At the council meeting of 5 July 1883, South Ward councillor Jones "objected to so much power being given to [the waterworks] committee, he held no large sums should be paid without reporting to the council and getting consent."[236] Fellow South Ward councillor Baker:

> coincides with Mr. Jones. The committee seemed to be paying out sums without proper consideration, and were keeping no tally. Pettit's award was not yet paid, witnesses were not paid. There would be another engineer to pay, and goodness gracious knows what beside. The $30,000 would be soon spent. He for one was resolved to oppose further expenditure than the $30,000, and would take steps to make councillors pay it out of their own pockets if they attempted to do so. The committee seem to be hiding the true state of affairs from the public and he was satisfied there was something rotten in the state of Denmark.[237]

Needless to say, council was not eager to allow such words to be spoken: "Mr. Baker sat down but rose to make further remarks after others had spoken, when he was called to

order, and he protested against being compelled to sit down while others could speak as often as they wished."[238]

The waterworks committee knew it had to rectify its negative public image, and set about to do so:

> The present waterworks committee has adopted a slightly different course of action from that of last year, and the chairman, Mr. Whitlaw, has expressed their determination to keep nothing from the public in regard to the works. A full and detailed report was handed in at the last council meeting, and although anything but satisfactory with regard to the work accomplished, it is just what the public wanted, and we now have the satisfaction of knowing the worst of the matter . . . At a cost of over $35,000 we have secured our waterworks such as they are.[239]

It would seem that the conspiracy involved the deliberate attempt to mislead the public as to the real cost of a waterworks system. The engineers, some councillors, and most waterworks supporters were part of this conspiracy. The tender received from Blackmore was a lowball bid which was so unrealistic as to prompt three upper town councillors to attempt to resubmit the bylaw to the public for a vote on a more realistic cost estimate.[240]

The conspiracy theory of Paris politics was expressed in 1892. A letter to the editor of the Paris Review signed "Elector" supported Thomas Evans, an ardent opponent of the waterworks scheme, for mayor:

> Look Out for the Clique . . . The "Clique," having in a measure lost their game by having their best man rolled over and so badly scared that he was afraid to face the music, now seems bent on venting their spleen on the man who dared to upset their plans, by bringing out a man who has willingly given up the deputy reeveship in order to help carry out the designs of the Clique, by defeating, if possible, the man who dared to speak his mind, and thus upset some of the schemes of those who acted as though the town belonged to them.
>
> Now, we know that men who act independently and without partiality, and who try to carry out the wishes of the people (and not their own personal interests), will never be popular with cliques who use their position to further their own schemes. How often have cliques so pulled the wires as to sacrifice the best of our public men, simply to gain their own, and not the interests of the town.[241]

In the election which followed, Evans lost to David Brown, 287 votes to 278.[242] The breakdown by ward shows a familiar pattern, given that the voting requirements for mayor were

much less stringent than for debenture issues, and that no plural voting was permitted for mayor.

Ward	David Brown	Thomas Evans
North	93	76
Kings	111	63
Queens	42	55
South	41	84

Evans would eventually be voted mayor in 1901.

The decision-making power in Paris was largely determined by provincial statutes which denied lower-class people any influence on major municipal issues. Higher-class Parisians alone enjoyed the privilege of voting on these matters, and of sitting on council. The pro-waterworks supporters consistently underestimated the cost of the system and overestimated its feasibility and capability. Such were not honest errors in judgment but were knowingly false statements which were circulated in an attempt to legitimate in the eyes of the masses a scheme over which they had no control. Two of the local newspapers were invaluable allies, as they shamelessly and uncritically repeated the propaganda of waterworks proponents. Waterworks service was sought only by industries, the railways, and by upper-class residents, most of whom lived in North Ward. The indirect benefit of lower insurance rates enticed owners of fixed capital generally. Residents in poorer areas of the town did not receive water service, yet still had to pay higher taxes to finance the scheme and subsidize the wealthy.

NOTES

1. A newspaper account from an indeterminate source was loosely clipped in C.H. Roberts' scrapbook, and indicates that a discussion of waterworks took place at Paris Town Council on 7 May 1877. The Paris council minutes indicate that on 7 May 1877, various motions were tabled regarding the issue of purchasing 800 feet of fire hose at a cost of $1.20 per foot. Four council members, led by Reeve Hall, favoured the purchase, while nine members opposed. Presumably among the opponents were those who preferred to have the money spent on a waterworks system.

2. Consolidated Municipal Act, 1883, Revised Statutes of Ontario, 46 Vic., chapter 18, section 346.

3. This catalogue advertised products which were available from W.H. Schieffelin & Co., and was printed in New York in 1881. This book is the property of the Paris Historical Society and is kept at the Paris Municipal Office on Grand River Street in Paris.

4. Brant Review, 25 May 1882, in C.H. Roberts' scrapbook, 75.

5. Paris Transcript, 26 May 1882, in C.H. Roberts' scrapbook, 75.

6. Paris Star, 24 May 1882, in C.H. Roberts' scrapbook, 77.

7. Paris Transcript, 1882, in C.H. Roberts' scrapbook, 49.

8. Brantford Courier, 10 July 1882, in C.H. Roberts' scrapbook, 317.

9. Brant Review, 1881, in C.H. Roberts' scrapbook, 17.

10. See 1. above.

11. Consolidated Municipal Act, 1883, s. 342.

12. Ibid., s. 346.

13. Ibid., s. 294.

14. Ibid., s. 73.

15. Ibid., s. 77.

16. Ibid., s. 78.

17. Ibid., ss. 79, 80.

18. Ibid., s. 87.

19. D.A. Smith, At the Forks of the Grand, vol. 2 (Paris, ON: Paris Public Library Board, 1982), 69.

20. Municipal Amendment Act, 1884, Statutes of Ontario, 47 Vic., chapter 32, section 3.

21. Consolidated Municipal Act, 1883, ss. 309-311.

22. Municipal Amendment Act, 1882, Statutes of Ontario, 45 Vic., chapter 23, section 15.

23. Consolidated Municipal Act, 1883, s. 342(2).

24. Ibid., ss. 136, 312.

25. This list is kept at the Town of Paris Municipal Office.

26. Brant Review, 25 May 1882, in C.H. Roberts' scrapbook, 75.

27. Ibid.

28. Paris Property Tax Assessment Records, Archives of Ontario, Toronto.

29. This is found on the page before page 1 of C.H. Roberts' scrapbook and is labelled by hand, in ink, "No. 2," suggesting that this was Roberts' second letter to the Transcript, as a "No. 1" immediately precedes it in the scrapbook and a "No. 3" follows it. the calculations contained in both of letters No. 1 and 2 are found written by hand directly onto an earlier page of the scrapbook, suggesting that C.H. Roberts had obtained these figures just before "Parisian" had written them to the Transcript.

30. Ibid.

31. Paris Waterworks Committee, Brant Review, 1881, in C.H. Roberts' scrapbook, 7.

32. See 29. above.

33. Paris Waterworks Committee, Brant Review, 1881, in C.H. Roberts' scrapbook, 17; Brant Review, 1881, in C.H. Roberts' scrapbook, 31.

34. Brant Review, 29 February 1884; D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 126.

35. C.H. Roberts' scrapbook, 31.

36. Paris Waterworks Committee, Brant Review, 1881, in C.H. Roberts' scrapbook, 29.

37. Brant Review, 1882, in C.H. Roberts' scrapbook, 51.

38. Paris Transcript, 1882, in C.H. Roberts' scrapbook, 63.

39. Ibid.

40. Brant Review, 17 November 1881, in C.H. Roberts' scrapbook, 33.

41. Letter to the Editor, Brant Review, 1881, in C.H. Roberts' scrapbook, 7; Brant Review, 17 November 1881, in C.H. Roberts' scrapbook, 33.

42. D.A. Smith, At the Forks of the Grand, vol. 1, 129.

43. Brant Review, 27 October 1881, in C.H. Roberts' scrapbook, 25.

44. Brant Review, 31 March 1882, in C.H. Roberts' scrapbook, 41.

45. Brant Review, 31 March 1882, in C.H. Roberts' scrapbook, 39.

46. Brant Review, 1881, in C.H. Roberts' scrapbook, 21.

47. Brant Review, 20 April 1882, in C.H. Roberts' scrapbook, 51.

48. Paris Waterworks Committee, Brant Review, 1881, in C.H. Roberts' scrapbook, 7.

49. Letter to the Editor, Brant Review, 1881, in C.H. Roberts' scrapbook, 16.

50. Paris Transcript, 28 April 1882, in C.H. Roberts' scrapbook, 57.

51. Ibid.

52. Brant Review, 13 July 1882, in C.H. Roberts' scrapbook, 309.

53. Ibid.

54. Paris Transcript, 14 July 1882, in C.H. Roberts' scrapbook, 319.

55. Brant Review, 13 July 1882, in C.H. Roberts' scrapbook, 309.

56. Paris Bylaw #208, 26 June 1882.

57. Brant Review, 17 November 1881, in C.H. Roberts' scrapbook, 33.

58. Brant Review, 13 April 1882, in C.H. Roberts' scrapbook, 47.

59. Brant Review, 1881, in C.H. Roberts' scrapbook, 29.

60. Brant Review, 18 May 1882 (quoting an earlier editorial of the Paris Star).

61. Brant Review, 6 April 1882, in C.H. Roberts' scrapbook, 42.

62. Ibid.

63. Ibid.

64. D.A. Smith, At the Forks of the Grand, vol. 1, 224.

65. Ibid., 34.

66. Brant Review, 13 April 1882, in C.H. Roberts' scrapbook, 42.

67. D.A. Smith, At the Forks of the Grand, vol. 1, 126.

68. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

69. Ibid.

70. Ibid.

71. Ibid.

72. D.A. Smith, At the Forks of the Grand, vol. 2, 178.

73. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

74. Ibid.

75. Ibid.

76. D.A. Smith, At the Forks of the Grand, vol. 1, 53-5.

77. Paris Transcript, 19 May 1882.

78. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

79. C.H. Roberts' scrapbook, 163.

80. Paris Bylaw #201, 1881; Paris Bylaw #212, 1882.

81. Paris Transcript, 15 July 1883, in C.H. Roberts' scrapbook, 111.

82. J.P. Pickell, "Newspapers and Editors," in At the Forks of the Grand, vol. 1, D.A. Smith, (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 285-7.

83. D.A. Smith, At the Forks of the Grand, vol. 2, 125-8.

84. J.P. Pickell, "Newspapers and Editors," 289.

85. Paris Review, 10 November 1887.

86. Ibid.

87. Ibid.

88. Ibid.

89. Ibid.

90. Ibid.

91. D.A. Smith, At the Forks of the Grand, vol. 1, 126.

92. Brant Review, 1881, in C.H. Roberts' scrapbook, 17.

93. Paris Transcript, 1882, in C.H. Roberts' scrapbook, 45

94. Paris Transcript, 1882, in C.H. Roberts' scrapbook, 44.

95. Paris Transcript, 21 April 1882, in C.H. Roberts' scrapbook, 53.

96. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

97. C.H. Roberts' scrapbook, 1. It is assumed that this list of 147 names, all in the same handwriting, was a copy of the petition which the Town of Paris Minute Book refers to as a petition by C.H. Roberts and 150 others. C.H. Roberts' name is first on this list.

98. Letter to the Editor signed "Energy," Paris Transcript, July 1882, in C.H. Roberts' scrapbook, 275.

99. D.A. Smith, At the Forks of the Grand, vol. 1, 127.

100. Ibid., 119.

101. See, for example, a letter to the editor of the Brant Review signed "Senex," 16 March 1882, in C.H. Roberts' scrapbook, 37; also a letter from engineer J.A. Bell in the Paris Transcript, April or May 1882, in C.H. Roberts' scrapbook, 61.

102. Letter to the Editor signed by C.H. Roberts, Paris Transcript, 13 July 1883, in C.H. Roberts' scrapbook, 365.

103. Brant Review, 27 October 1882, in C.H. Roberts' scrapbook, 339.

104. Paris Transcript, July 1882, in C.H. Roberts' scrapbook, 275.

105. Brant Review, 18 May, 1882, in C.H. Roberts' scrapbook, 71.

106. Paris Transcript, April or early May 1882, in C.H. Roberts' scrapbook, 61. See 101. above.

107. Letter to the Editor signed "Junius," Brant Review, 1881, in C.H. Roberts' scrapbook, 11.

108. Brant Review, 1881 (report of Town Council Meeting), in C.H. Roberts' scrapbook, 21.

109. Brant Review, 6 April 1882, in C.H. Roberts' scrapbook, 42.

110. Paris Waterworks Committee, Brant Review, 1881, in C.H. Roberts' scrapbook, 29.

111. Dianne Newell and Ralph Greenhill, Survivals: Aspects of Industrial Archeology in Ontario (Boston Mills Press), 69.

112. Charles Tomlinson, ed., Cyclopaedia of Useful Arts (London: Virtue and Co., 1866), 450.

113. Ibid., 136.

114. The Useful Arts and Manufactures of Great Britain (London: Society for Promoting Christian Knowledge, 1846), 476.

115. Paris Bylaw #378, 10 October 1898.

116. W.A. McLean, "Waterworks, Electric Lighting, Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902): 12.

117. D.A. Smith, At the Forks of the Grand, vol. 1, 126.

118. Minutes of the Paris Council, 16 October 1882.

119. D.A. Smith, At the Forks of the Grand, vol. 1, 284.

120. Ibid., 63.

121. Town of Paris Property Tax Assessment Rolls, 1881 (Archives of Ontario); D.A. Smith, At the Forks of the Grand, vol. 1, 72.

122. D.A. Smith, At the Forks of the Grand, vol. 1, 101.

123. Instrument #3375, 22 February 1882, County of Brant Land Registry Office, Brantford, Ontario.

124. D.A. Smith, At the Forks of the Grand, vol. 2, 130.

125. Town of Paris Property Tax Assessment Records, 1881 (Lots 6, 7 and 8, west side of Gold Street).

126. Instrument #3411, 19 April 1882, County of Brant Land Registry Office, Brantford, Ontario.

127. Instrument #3215, 23 February 1881, County of Brant Land Registry Office, Brantford, Ontario.

128. D.A. Smith, At the Forks of the Grand, vol. 1, 63.

129. Instrument #3662, 16 August 1883, County of Brant Land Registry Office, Brantford, Ontario.

130. Town of Paris Property Tax Assessment Records, 1881 (west side, Elgin Street).

131. Ibid. (north side, Queen Street).

132. Ibid. (lot 5, east side, Grand River Street North).

133. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 163.

134. Brant Review, 1882, in C.H. Roberts' scrapbook, 67.

135. Paris Transcript, July 1882, in C.H. Roberts' scrapbook, 275.

136. Paris Transcript, 13 July 1883, in C.H. Roberts' scrapbook, 365.

137. Paris Transcript, May 1882, in C.H. Roberts' scrapbook, 55.

138. Paris Transcript, 10 July 1882, in C.H. Roberts' scrapbook, 319.

139. Brant Review, 1881, in C.H. Roberts' scrapbook, 7.

140. Ibid.

141. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 71.

142. Ibid.

143. Minutes of the Paris Waterworks Committee, 20 September 1897.

144. Paris Bylaw #297, section 8, 16 December 1889.

145. Municipal Waterworks Act, 1882, Statutes of Ontario, 43 Vic., chapter 25, section 46. Assented to 10 March 1882.

146. Waterloo Chronicle-Telegraph, 10 January 1901.

147. Brant Review, 1881, in C.H. Roberts' scrapbook, 3.

148. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 163.

149. Ibid.

150. Paris Star-Transcript, 20 May 1903 (editorial).

151. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

152. Minutes of the Paris Council, 4 May 1885.

153. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 163.

154. Ibid.

155. Brant Review, 27 October 1882, in C.H. Roberts' scrapbook, 339.

156. Paris Transcript, 26 October 1882, in C.H. Roberts' scrapbook, 339.

157. Paris Bylaw #393, 1 September 1899.

158. Brant Review, 1881, in C.H. Roberts' scrapbook, 3.

159. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 163.

160. Brant Review, May 1882, in C.H. Roberts' scrapbook, 65.

161. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

162. City of Brantford and County of Brant Gazetteer and Directory 1880-81 (Brantford, ON: W.H. Irwin and Co., 1880); and the Town of Paris Property Tax Assessment Rolls, 1881 (lot 5, east side, Grand River Street North).

163. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

164. Ibid.

165. Brant Review, May 1882, in C.H. Roberts' scrapbook, 67.

166. Ibid.

167. Ibid.

168. Brant Review, 27 October 1881, in C.H. Roberts' scrapbook, 26.

169. Letter to the Editor signed "Ratepayer," Brant Review, 1881, in C.H. Roberts' scrapbook, 16.

170. Letter to the Editor, Brant Review, 6 April 1882, in C.H. Roberts' scrapbook, 42.

171. Paris Transcript, 7 May 1882, in C.H. Roberts' scrapbook, 43.

172. Ibid.

173. Brant Review, 10 August 1882, in C.H. Roberts' scrapbook, 355.

174. See, for example, Appleton's Cyclopedia of Applied Mechanics (New York: 1880), 664-7.

175. Ibid., 666.

176. Brant Review, 1881, in C.H. Roberts' scrapbook, 17.

177. Brant Review, 13 April 1882, in C.H. Roberts' scrapbook, 47.

178. Brant Review, 1881, in C.H. Roberts' scrapbook, 17.

179. Paris Transcript, 21 April 1882, in C.H. Roberts' scrapbook, 53.

180. Paris Transcript, May 1882, in C.H. Roberts' scrapbook, 65.

181. Brant Review, 1881, in C.H. Roberts' scrapbook, 7.

182. Brant Review, 1881, C.H. Roberts' scrapbook, 3.

183. C.H. Roberts' scrapbook, 95.

184. Brant Review, 10 August 1882, in C.H. Roberts' scrapbook, 355.

185. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

186. Ibid.

187. Paris Transcript, 28 April 1882, in C.H. Roberts' scrapbook, 57.

188. Ibid.

189. Ibid.

190. Paris Transcript, 19 October 1882, in C.H. Roberts' scrapbook, 357.

191. Brant Review, 1881, in C.H. Roberts' scrapbook, 19.

192. Brant Review, 1881, in C.H. Roberts' scrapbook, 19.

193. Paris Transcript, July 1882, in C.H. Roberts' scrapbook, 275.

194. Paris Transcript, May 1882, in C.H. Roberts' scrapbook, 63.

195. Ibid.

196. Ibid.

197. Paris Transcript, June 1882, in C.H. Roberts' scrapbook, 259.

198. Ibid.

199. Paris Transcript, 13 July 1883, in C.H. Roberts' scrapbook, 365.

200. Minutes of the Paris Water and Light Commission, 5 May 1915.

201. Paris Transcript, 19 May 1882, in C.H. Roberts' scrapbook, 163.

202. Brant Review, 14 June 1883.

203. Paris Transcript, May 1882, in C.H. Roberts' scrapbook, 61.

204. Brant Review, 1881, in C.H. Roberts' scrapbook, 19.

205. See 1. above.

206. Brant Review, 1881, in C.H. Roberts' scrapbook, 5.

207. Brant Review, 1881, in C.H. Roberts' scrapbook, 9.

208. Brant Review, 1881, in C.H. Roberts' scrapbook, 29.

209. Brant Review, 17 November 1881, in C.H. Roberts' scrapbook, 33.

210. Brant Review, 29 February 1884.

211. Paris Review, 10 November 1887 (microfilm reel #4, Paris Public Library).

212. Brant Review, 1881, in C.H. Roberts' scrapbook, 1.

213. Paris Transcript, 1881, in C.H. Roberts' scrapbook, page opposite 1.

214. Brant Review, 18 May 1882, in C.H. Roberts' scrapbook, 71.

215. Brant Review, 13 April 1882, in C.H. Roberts' scrapbook, 47.

216. Minutes of the Paris Council, 16 October 1882.

217. Ibid., 25 February 1884.

218. Ibid.

219. Brant Review, 29 February 1884.

220. M.N. Baker, ed., The Manual of American Waterworks, fourth issue (New York: The Engineering News Publishing Co., 1897), 604.

221. W.A. McLean, "Waterworks, Electric Lighting, Sewerage."

222. All of these bylaws are kept at the Paris Municipal Office.

223. W.A. McLean, "Waterworks, Electric Lighting, Sewerage."

224. Brant Review, circa August 1881, in C.H. Roberts' scrapbook, 3.

225. Brant Review, April 1882, in C.H. Roberts' scrapbook, 45.

226. Brant Review, 6 July 1882, in C.H. Roberts' scrapbook, 309.

227. Ibid.

228. Brant Review, 10 August 1882, in C.H. Roberts' scrapbook, 355.

229. C.H. Roberts' scrapbook, 195.

230. Brant Review, 14 June 1883.

231. C.H. Roberts scrapbook, 195-7.

232. Minutes of the Paris Council, 7 May 1883.

233. Ibid., 3 July 1883.

234. Ibid., 2 June 1884.

235. Ibid., 16 October 1882; Paris Transcript, 19 October 1882, in C.H. Roberts' scrapbook, 357.

236. Brant Review, 5 July 1883.

237. Ibid.

238. Ibid.

239. Brant Review, 29 February 1884.

240. Minutes of the Paris Council, 16 October 1882.

241. Paris Review, 14 December 1892.

242. Paris Star-Transcript, 8 January 1902.

CHAPTER 5

THE IMPACT OF PROVISION

1. INTRODUCTION

Even after the construction of the original waterworks network in Paris in 1884, the management and growth of the system benefitted the wealthy residents of the town disproportionately. There seems to have always been too little water for the combined demands of the town's users. There were attempts made to misrepresent the amount of water being allocated to industrial users. There were allegations that those who were supplied water domestically were wasting it. Though commonly employed in many other towns in Ontario in the 1880s, Paris did not compel the use of water meters, in residences or in mills, until after the turn of the century. It seems that the wealthy in Paris sought and secured water service, from which they used copious amounts of water with the luxury of a flat rate payment system. Residents of poorer areas of the town did in some instances seek water service, but were less successful in securing one.

There is not a lot of original documentation in existence concerning the administration of the waterworks system in Paris during its early period, before the turn of the century. Ideally, a study of the spatial and social distribution of waterworks subscribers would be conducted, but complete data of this kind exists only from 1917 onward. By 1917, there were 1,113 waterworks subscribers in Paris. (See Table 5.1 for the statistics concerning the number of waterworks subscribers in Paris for selected years.) Because of this lack of early data at the level of the individual, this chapter is based, for residential purposes, on data at the street

TABLE 5.1

THE NUMBER OF WATERWORKS SERVICES IN PARIS, 1884-1929

Year	# of Services	Source of Information
1884	82	D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 127.
1891	300	Minutes of the Town of Paris Council, 21 December 1891.
1892	360	Minutes of the Town of Paris Council, 15 December 1892.
1897	400	M.N. Baker, ed, The Manual of American Waterworks, 4th issue (New York: The Engineering News Publishing Co., 1897), 604.
1901	440	W.A. McLean, "Waterworks, Electric Lighting, Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902): 2.
1917	1,113	Account book of the Paris Hydro Electric and Water Commission, 1917-1924.
1929	1,277	Account book of the Paris Hydro Electric and Water Commission, 1925-1929.

scale. Town council bylaws and minutes, as well as waterworks committee minutes, generally describe the expansion of the system, and further particularity can be achieved by referring to the Goad fire insurance map of 1913. As for industrial users, data pertaining to individual establishments is more readily available, as much more concern for water provision was expressed by them, and since greater attention was paid to them by various civic authorities, especially the waterworks committee.

2. INDUSTRIAL CONSUMPTION OF WATER FROM THE PARIS WATERWORKS

Judging solely from an article by W.A. McLean in a supplement to a 1902 edition of Municipal World, one would think it unnecessary to consider the consumption by Paris industries of the town's water. McLean wrote:

> There are laid 440 water services. These are nearly all for domestic supply, very little of the town water being used for manufacturing purposes, owing to the suitable character of the river water.[1]

Having concluded that industrial consumption of water was insignificant, a problem presented itself to McLean:

> A very unusual circumstance for a town the size of Paris is that it is necessary to operate the pump almost continuously . . . The pump is not fitted with a recording meter, but the amount of water flowing from the springs has been estimated . . . at 528,000 gallons in twenty-four hours, and by making a sufficient reduction for the time the pump is idle, the daily consumption would be placed at fully 400,000 gallons. With a population of 3,230, this amounts to 124 gallons per capita of population daily.
>
> Very little water is supplied for manufacturing purposes, and if the estimate of the quantity is correct, the rate of consumption is excessive for purely domestic purposes. Half this quantity should be an abundance.[2]

McLean surmised that the excess usage resulted from waste, which was "not a difficulty confined to Paris."[3] Faulty fixtures, careless users, and defective joints in water mains could explain this waste, for which McLean suggested "meters on each service [as] a complete cure," or "a system of inspection."[4]

However, other evidence suggests that the excessive per capita consumption of water in Paris resulted from excessive consumption by the local industries. That water was at least in demand by many Paris industries is clear from the number of them which sought and received free water service. The following bylaws each granted a local industry free water for ten years:

TABLE 5.2

BYLAWS EXEMPTING MANUFACTURERS FROM WATER SERVICE CHARGES

Bylaw #	Date	Exempted Manufacturer
272	19 March 1888	Mary L. Adams (Woolen Mill)
278	17 September 1888	Wincey Mill
281	12 November 1888	John Stewart and William Hutton
331	13 November 1893	Paris Electroplating and the Alabastine Co. Ltd.
378	10 October 1898	Penman Manufacturing Co.
404	2 April 1900	Wheeler Needle Works
457	13 April 1903	Sanderson-Harold
458	8 June 1903	Paris Plow Co.
503	26 March 1903	Penman Mfg. Co.
618	28 August 1916	George W. McFarlane Engineering

Other industries obtained water from the system but were willing to pay for it. For example, the following resolutions appear in the minutes of the Paris waterworks committee, all of which were carried:

> 11 September 1893: That the Paris Tool Co. Limited be charged at the rate of $60.00 per annum for water for a 20 horsepower boiler for the balance of the year.
>
> 7 August 1894: That the contract for supply of water now existing between the Grand Trunk Railway and the Corporation of Paris be renewed for a further

> period of 10 years upon the same terms and conditions and that the clerk immediately notify the G. T. Authorities to this effect.
>
> 14 September 1896: That this Committee report through their chairman that they do not deem it advisable to grant the request of the Paris Wincey Mill Co. for free water, but would recommend that they be granted all the water they need at the same rate as is charged other like industries in the town. [emphasis added]

This widespread usage of the waterworks by industry continued until 1900, at which time Thomas Evans, a waterworks opponent in 1882, became mayor of Paris. Provincial legislation reduced the number of councillors in towns to only six[5], elected at large, one of whom was, in Paris, John Baker. In 1900, the waterworks committee, chaired by Councillor W.W. Patterson, reported to council as follows:

> Your committee on waterworks having had their attention called to the serious state of affairs regarding the water in the reservoir, by the waterworks inspector, beg to report
>
> 1st That they find the water is being used in contravention of the By-law, and in violation of the condition on which water has been granted to mills, users of motors, and others;
>
> 2nd That the law gives power to the committee on waterworks to shut off the supply of water from all mills, users of motors, etc., when in their opinion the interest of the public so requires;
>
> 3rd That the waterworks system was inaugurated for the sole purpose of domestic use and fire protection.
>
> [A section here states that contracts for illegal purposes are cancelled.]
>
> Also that the Clerk be and is hereby instructed to notify the managers of the several mills and factories that are using town water that it is the wish of the council that the utmost care be exercised to minimize the consumption of water . . . so that the public interests may not have the unpleasant duty forced upon them, to enforce the law and shut off the supply altogether.[6]

The response which council received from Penman's Manufacturing Co. stated that the Company:

> regret to note a strong feeling against the manufacturers by some members of the council and hope for the good of the town the council will not adopt a policy that will drive the industries we have away.[7]

The town's response to Penman's letter was sent by the waterworks committee, which resolved:

> That the Clerk be instructed to write Mr. Henderson, manager of the Penman Mfg. Co., that the committee on waterworks has considered his communication and regret that the intentions of the committee have been misconstrued, that this council has not the slightest antagonism to the company or to any other manufacturers; that they have only acted in a manner to ensure a proper supply of water for fire protection and domestic purposes; and believe that the supply of water in the reservoir has greatly increased during the past few days. The timely suggestions of the committee have had a good effect and there will in future be no shortage of water. We are glad to know that attention has been given to this matter which will without doubt prove mutually beneficial to all concerned.[8]

By 1902, the composition of council again shifted, this time back to the pro-industry position of pre-1900. Among the new councillors was J.B. Henderson, the manager of Penman's. The Paris Star-Transcript wrote that the members of the newly elected 1902 council:

> are eminently qualified to work out and put into practice such a line of action as will bring to our town a share of the prosperity which is generally enjoyed throughout Ontario . . . give them a free hand to undertake those schemes which they consider in the best interests of the town; restrain those premature criticisms which are too often suggested by timidity, lack of progressiveness, and a spirit of false economy; back them up loyally in all their undertakings, and when they meet with success and bring increased prosperity to our town, don't be backward about expressing your appreciation of their work.[9]

The new regime acted quickly. On 27 January 1902, they passed bylaw #436, which removed from council and committees of council the jurisdiction over the waterworks system. Instead, a bureaucratic commission would manage the system. By 1904, J.B. Henderson had become the waterworks commissioner, although he would resign and eventually die in 1905.[10]

Also in 1902, John Penman approached council with a list of concessions which he sought in exchange for his agreement to site a new agricultural machinery company in Paris. He and his co-investors in the Paris Plow Company claimed that they were "not asking more than any other municipality would be glad to have the opportunity of granting."[11] This included a footbridge over the railway which was adjacent to the property, sidewalks, a six-inch water service, a tile drain, fire hydrants, and free water service.[12] The site chosen was south of Silver

Street, east of Adams Street, and north of the Great Western Railway, in North Ward. This site was chosen due to its proximity to the railway junction,[13] even though the lot was then located outside the Town of Paris limits. The site would eventually be annexed by the town, and the plow works built. The operation was discontinued by 1916,[14] and perhaps as early as 1913, which was also the year when the ten-year grant of free water expired. The Paris Star-Transcript argued that the expense incurred by the town in providing the waterworks extension to the annexed area was "mostly for the benefit of the residents of the station, and not for the Plow Company alone.[15]

Thus, McLean's claim in 1902, quoted earlier, that "very little water is supplied for manufacturing purposes" seems specious. In 1909, for example, Richard Thomson, the new manager of Penman's mills, appealed to the Water and Light Commission for a renewal of his firms's ten-year contract for free water:

> Mr. Thomson expressed the opinion that the company he represented were entitled to consideration in the matter of free water to a certain extent - as all previous commissions had agreed to meet them in that respect. As the term of agreement had expired he wanted to make some satisfactory arrangement, and it was suggested that a certain quantity be named for free use during each quarter and that a meter be installed and water charged for after that named limit be reached. Mr. Thomson also expressed himself strongly that at no time should his company draw any water from the Town when the reservoir contained less than five feet of water and that the Inspector be instructed to shut off their mills on any such occasion. The Commission also agree to accept $600 in settlement of all water-rates due by Penman Mfg. Co. to the end of December, 1909.[16]

The seemingly strong concern for propriety and civic responsibility expressed in Mr. Thomson's submission was betrayed by secret actions taken by Penman's in 1916, described in these Commission minutes:

> Whereas . . . some time ago the Commission was asked to remove the meters from this mill as they would require Town Water only for drinking and fire protection, but since the meters were removed the Inspector found that connections have been restored to former services, without notifying or obtaining permission to do so from the Commission - We should ask the secretary to notify the Penman's Co. to disconnect all Town Water services with the exception of drinking and fire protection and that they repair the present leaks as soon as possible. Also that the secretary instruct the different mills in

> Town who are using Town Water, that in making any future extensions, application must first be made to the Commission . . . [17]

That water was in short supply in Paris at this time is confirmed by a Commission decision in December 1915 regarding another industrial request for free water. The Commission stated that "owing to the shortage of water supply the Commission can only supply water for manufacturing purposes to the Walker Press at the regular meter rates."[18] Even as late as 1934, there is evidence that town water was in short supply, and that there were concerns about the allocation of that limited resource among the various users. The Paris Public Utilities Commission resolved on 6 March 1934 "that the Superintendant be empowered to interview and request users to conserve water, and to take all necessary steps or methods to preserve our water supply for domestic and fire use."[19]

While Richard Thomson's letter suggests that mills began receiving metered water in approximately 1910,[20] it was not until 1939 that the flat rate system of payment was eliminated for domestic users and metering became compulsory.[21] However, as early as 1890, the Paris Waterworks Committee had recommended that meters be installed in factories and livery stables,[22] though this recommendation was not then implemented. In Galt, Ontario in 1902, there were 175 metered services.[23] In 1897 Petrolia, Ontario, made the "use of meters compulsory for all services," while meters were compulsory for factories in Berlin (now known as Kitchener), Brantford, Galt (now known as Cambridge), Hamilton, and Waterloo.[24] Some cities, such as Brantford, made meters compulsory for railways.[25] Many others, such as St. Catharines and St. Thomas, made meters compulsory for all "large users" of water.[26]

3. SPATIAL AND RESIDENTIAL ASPECTS OF THE EXTENSIONS AND IMPROVEMENTS TO THE PARIS WATERWORKS SYSTEM

The network of mains which was originally constructed in Paris in 1884 serviced the industrial and upper class residential areas of the town. In the years which followed, improvements in service were made to these areas, and some previously unserviced areas also

became part of the network. The South Ward was the last major area of the town to receive service, in spite of the fact that it was relatively densely populated.

Various maps and tables in this chapter will assist in correlating the social geography of Paris with the pattern of waterworks development. Map 5.1 shows the distribution of the homes of the affluent. Most of these dwellings which were assessed at over $1,500 for tax purposes are located in lower town, particularly in Quality Hill and on the east side of the peninsula between the two rivers. Map 5.2 shows the distribution of the dwellings of the poor. Most of these dwellings which were assessed at under $500 are located in upper town, and on the west side of the peninsula between the two rivers (Slabtown). Table 5.3 shows that the mean value of dwellings in South Ward was far below the mean value for dwellings in the other three wards. Tables 5.4 to 5.7 show, for each of the four wards, the mean value of all the residential property on each street. Those streets, such as Grand River Street, which have segments in more than one ward, are given mean values for the properties along each such segment.

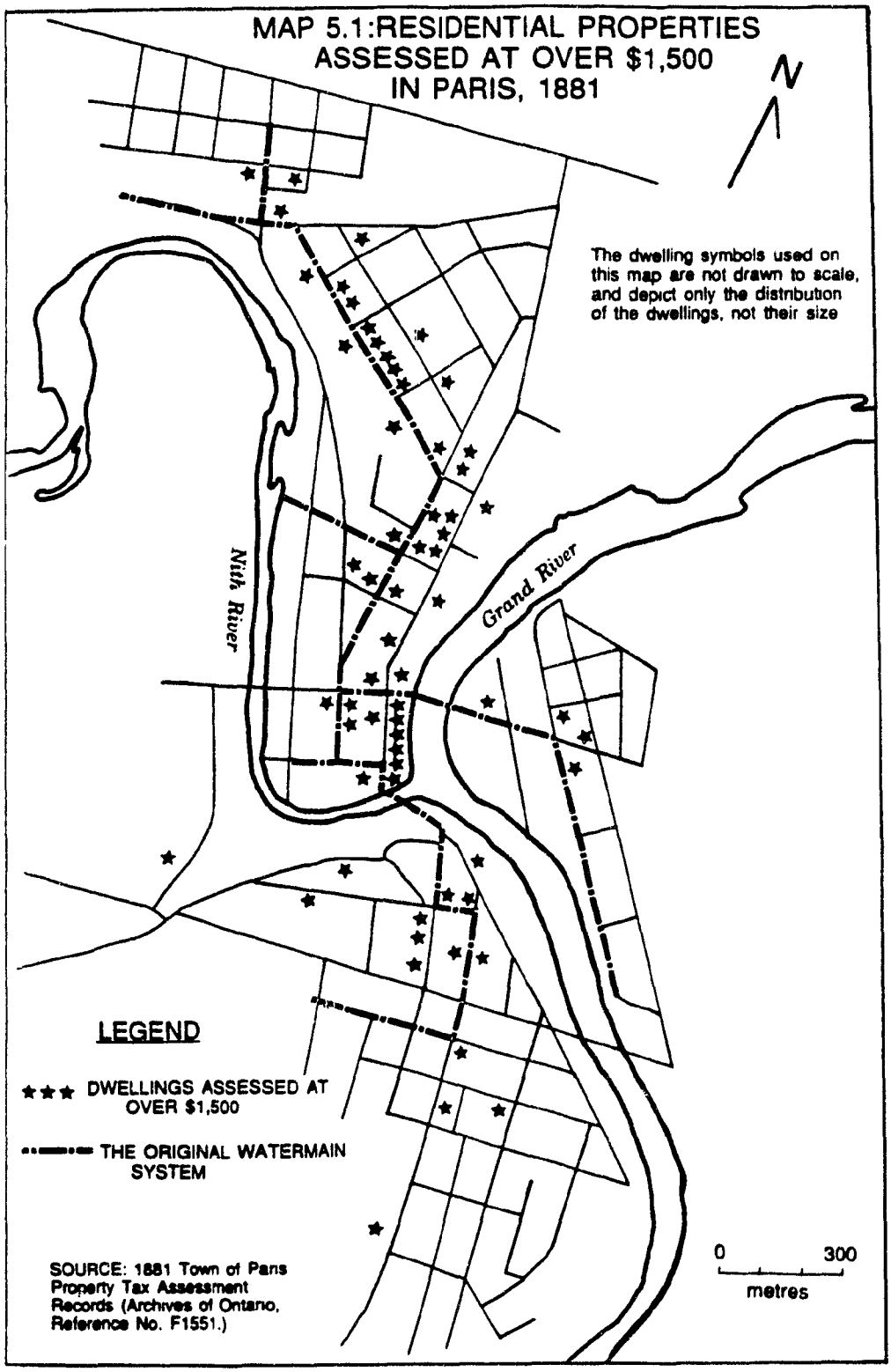
In his annual report to town council in 1891, waterworks superintendent John Brockbank stated that forty-three new water services had been installed in that year.[27] He added that:

> The circulation is required to be improved in some places, there being too many dead ends, and the mains should be extended on the Flats, in North and South Wards, next year if possible.[28]

Also in 1891, Dr. Dunton stated in his annual health report that:

> It is gratifying to note that the citizens are availing themselves to the Town water more generally since a Waterworks Inspector had been created. This is desirable especially on The Flats, where well water cannot be reliable.[29]

Even though twenty-nine new services were installed in the next year, the needs expressed previously were still existent in 1892. John Brockbank reported to council that "a number of householders on the Flats and in the North Ward are wanting water very much and should be supplied next summer if possible."[30] Dr. Dunton stated that the installation of these twenty-nine new services meant that "the citizens of Paris are losing faith in well supplies."[31]


MAP 5.1:RESIDENTIAL PROPERTIES ASSESSED AT OVER $1,500 IN PARIS, 1881
N
The dwelling symbols used on this map are not drawn to scale, and depict only the distribution of the dwellings, not their size
Nith River
Grand River
LEGEND
DWELLINGS ASSESSED AT OVER $1,500
THE ORIGINAL WATERMAIN SYSTEM
SOURCE: 1881 Town of Paris Property Tax Assessment Records (Archives of Ontario, Reference No. F1551.)
0
300
metres

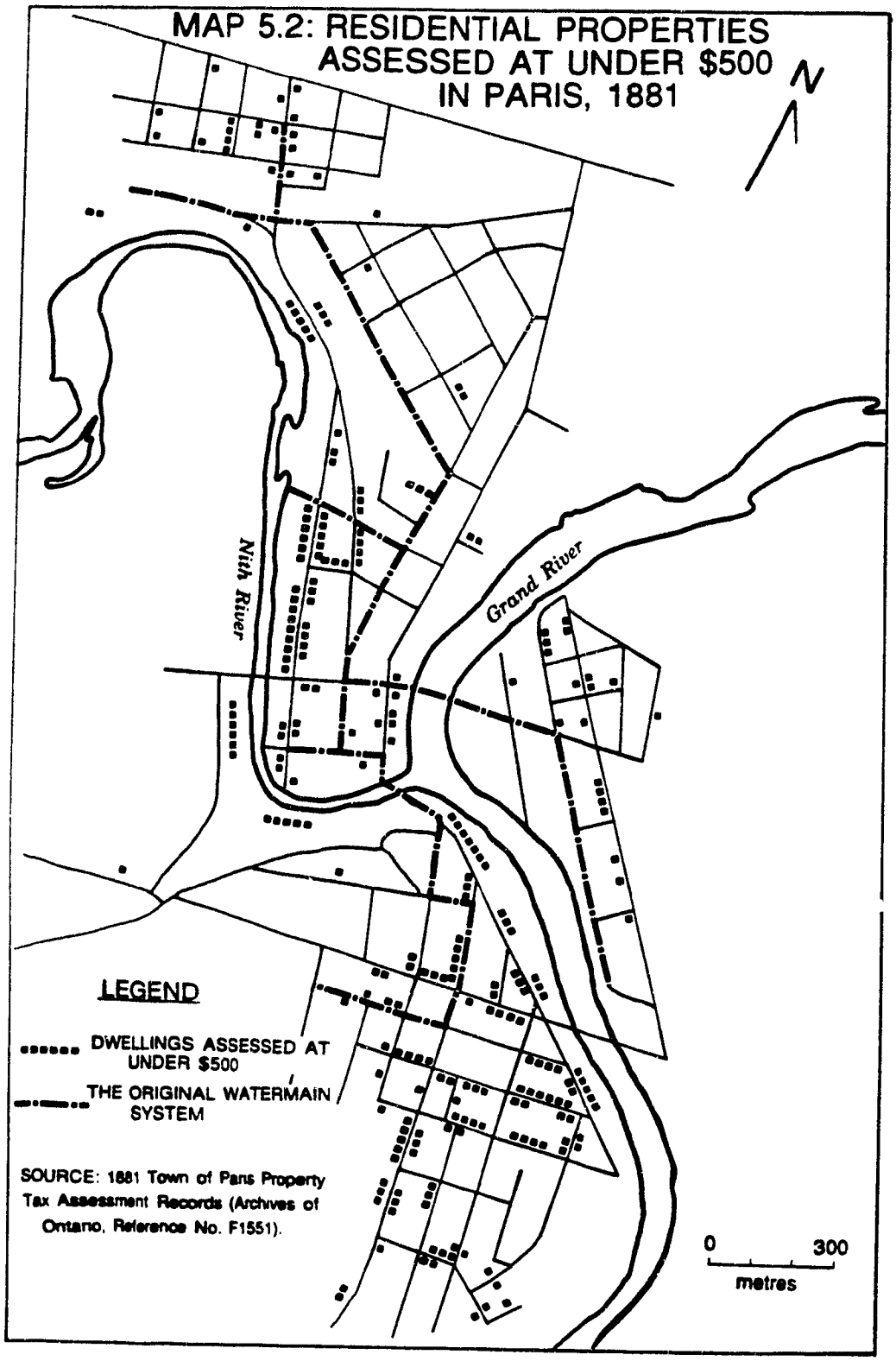

MAP 5.2: RESIDENTIAL PROPERTIES ASSESSED AT UNDER $500 IN PARIS, 1881
N
Nith River
Grand River
LEGEND
DWELLINGS ASSESSED AT UNDER $500
THE ORIGINAL WATERMAIN SYSTEM
SOURCE: 1881 Town of Paris Property Tax Assessment Records (Archives of Ontario, Reference No. F1551).
0
300
metres

TABLE 5.3

MEAN RESIDENTIAL PROPERTY VALUE BY WARD IN PARIS, 1881

Ward	Total Value of Residential Property in Ward	Number of Assessed Properties	Mean Value in Dollars
North	158,750	165	962
Kings	154,025	163	944
Queens	94,700	108	876
South	84,700	146	580

SOURCE: Town of Paris Property Tax Assessment Records, Archives of Ontario, reference number F1551.

TABLE 5.4

MEAN PROPERTY TAX ASSESSMENT VALUES FOR DWELLINGS BY STREET IN NORTH WARD, PARIS, ONTARIO, 1881

Street Name	Total Number of Assessed Properties	Mean Value in Dollars
Banfield	31	1,444
Jane	14	1,200
Capron	5	1,180
Market	15	661
Brydges	2	1,050
Gold	1	1,000
Spruce	2	1,500
Franklin	11	772
Wellington	2	400
Jefferson	5	630
Mulberry	2	225
Railway	6	758
Ayr	11	227
West River	18	416
West Broadway	12	666
Emily	2	675
East Broadway	13	1,288
John	3	800
Grand River St. N.	10	2,655

SOURCE: Town of Paris Property Tax Assessment Records, Archives of Ontario, reference number F1551.

TABLE 5.5

MEAN PROPERTY TAX ASSESSMENT VALUES FOR DWELLINGS BY STREET IN KINGS WARD, PARIS, ONTARIO, 1881

Street Name	Total Number of Assessed Properties	Mean Value in Dollars
Grand River St. N.	27	1,631
Grand River Lane	4	587
Broadway	17	1,250
Mechanic	2	1,350
West River	36	552
William	12	912
Elm	7	657
Willow	23	886
Walnut	32	826
Walter	2	537
Nimmo	1	300

SOURCE: Town of Paris Property Tax Assessment Records, Archives of Ontario, reference number F1551.

TABLE 5.6

MEAN PROPERTY TAX ASSESSMENT VALUES FOR DWELLINGS BY STREET IN QUEENS WARD, PARIS, ONTARIO, 1881

Street Name	Total Number of Assessed Properties	Mean Value in Dollars
Dumfries	32	1,009
Burwell	24	839
Grand River St. S.	23	686
Dundas	10	500
Arnold	3	1,650
Elgin	6	908
Church	6	900
West	1	750
King	1	2,000
Barker	2	1,450

SOURCE: Town of Paris Property Tax Assessment Records, Archives of Ontario, refence number F1551.

TABLE 5.7

MEAN PROPERTY TAX ASSESSMENT VALUES FOR DWELLINGS BY STREET IN SOUTH WARD, PARIS, ONTARIO, 1881

Street Name	Total Number of Assessed Properties	Mean Value in Dollars
Dundas	12	525
Main	24	770
Queen	33	606
King (Dumfries south of Dundas)	6	600
Ball	6	633
Grand River St. S.	12	491
Charles	5	440
Catherine	8	381
Amelia	6	450
Cross	1	350
Washington	24	643
Anne	4	275
Spencer	2	325
Elizabeth	2	350
Race	1	400

SOURCE: Town of Paris Property Tax Assessment Records, Archives of Ontario, reference number F1551.

In 1899, some action was taken to increase the pressure of the system in the Flats. A second main was placed across the Grand River, at the Dundas Street bridge.[32] It is unclear whether this was done for the benefit of the mills along the Willow Street raceway, or whether it was done in anticipation of an increase in the number of household subscribers, or both. The settled area of the Flats in 1881 consisted primarily of Willow, William and Walnut streets. The original 1884 main system serviced both Willow and William Streets. The 1913 Goad fire insurance map indicates that by 1913, Walnut Street, north of William, was serviced by a four-inch pipe. The 1924 Goad map indicates that by 1924, a four-inch pipe was laid on Walnut, south of William, to Yeo Street.

The North and South Wards did not receive their main extensions until 1903, but even then there was a catch. Bylaw #460 proposed that a total of $15,000 worth of debentures be issued for waterworks, with $5,000 being allocated to each of three purposes. These purposes were:

> extending an improved service to that portion of the said Town annexed thereto on December 31, 1902 [the Paris Plow Co. and the surrounding area in North Ward] and in the South Ward at an estimated cost of of $5,000;
>
> and the laying of a new and larger pipe from the pumping station to the reservoir at an estimated cost of $5,000 [replacing a 6 inch pipe with a 10 inch pipe];
>
> and by installing an electric motor and erecting poles and wires to connect the electric light station with the waterworks pumping station at an estimated cost of $5,000.[33]

The three issues were inseparable. The voters on the bylaw had to either reject all three initiatives, or accept all three. Earlier, in September 1902, a vote on bylaw #446 had authorized the expenditure of $2,500 for a waterworks extension to the annexed land in North Ward. In 1903, all of the issues were assembled into bylaw #460. At no point was a vote allowed on just the issue of extending the system into South Ward. The importance of the Paris Plow Co. to the town was stressed by the local newspapers. The Paris Star-Transcript wrote in 1902:

> There has been a general desire for some time among the citizens of Pans to secure some industry which would give employment to men and build up our town, but to the Board of Trade must be credited the putting of this desire into practical effect. When the erection of a large plow works in our midst was first proposed by them, many of our citizens were skeptical as to it ever being carried out.[34]

Three weeks later, the Star-Transcript added:

> Unfortunately, Paris has not been able to hold its young men. We venture to say that within the last 25 years, fully 75 per cent of the young men bred here have left town in quest of wider fields.[35]

Mayor David Brown said that "the request of the company for fire protection was only reasonable, as the buildings were situated where the fire protection was not very good."[36] A lengthy editorial in the Star-Transcript in 1903 confirms that South Ward was a lower class area, that it had been poorly serviced, and that its residents had paid for more of the waterworks expense than they had received in benefits:

> Also, the South Ward is to come in for a share of the advantage accruing from the passing of the bylaw. The residents of this ward are to be given the fire protection and the water supply for which they have so long been asking, and to which they are so well entitled. Ever since the installation of our waterworks system the residents of the southerly end of the town have freely paid year after year a generous share of the burden of taxation thereby imposed upon the ratepayers, and at the same time a great many of them have received no direct advantage from the system. Probably the great majority of citizens are not aware that the southerly end of town has never had any fire protection; the system does not extend farther than 2 blocks south of Dundas Street, and therefore all that portion of the town south of Catherine Street is absolutely without fire protection. It may be contended that the property in this section is not particularly valuable, and that there are no large or important interests which would suffer in case of fire. However, the residents of this section of the town are just as good citizens and just as important to the town as those of any other section. Their homes, although for the most part modest and unpretentious, are just as important, and even more so, to them than are the expensive homes in other parts of the town to their various owners. They have paid taxes imposed by the introduction of our waterworks system for over 20 years, and now that the system is on a paying basis these citizens are entitled to the benefits of fire protection if the citizens of any part of the town are. With the money thus available almost, if not the whole of the South Ward would be under good fire protection, and within a radius where water could be obtained for domestic purposes also where desired.[37]

The 1913 Goad fire insurance map shows that in South Ward, a six-inch pipe had been laid along Washington Street as far south as Ann Street, and along Queen Street from

Washington to Ball Street. A four-inch pipe had been laid along Ball from Dundas to Ann, and along Queen and Catherine Streets, between Ball and Charles Streets. This network did make water service available to most of the ward. The 1924 Goad map confirms that no further extensions were made in the South Ward from 1913 to 1924.

In North Ward, the 1913 Goad map shows that only a few mains had been installed in the "Junction" area north of the Great Western Railway tracks. A six-inch main had been installed to the Paris Plow site along Wellington Street, east of Market Street. A four-inch main had been installed on Spruce Street between Franklin and Market. However, the part of North Ward which received most of the extensions after 1884 was that area south of the Great Western Railway and just north of affluent Banfield Street. This is the area to which D.A. Smith referred when he wrote, as quoted earlier, that affluent residents of Quality Hill wanted a waterworks system in 1882 "because it would enhance the value of vacant lots north of Banfield Street, some of which they owned."[38]

Interestingly, in 1883 when the initial waterworks system was being constructed, two plans of subdivision of Paris land were registered in the County of Brant Registry Office. Both of these parcels were located in North Ward. Plan 115 pertained to land located west of Mulberry Street, in the extreme northwest corner of the town limits.[39] Plan 90 entailed the triangle of land formed by Capron, St. Andrew, and Broadway Street East, in the extreme northeast corner of the town.[40] The surveyor who drafted Plan 90 was a James A. Bell,[41] the same name as that belonging to the second engineer employed to construct the Paris waterworks system.

The 1913 Goad map shows that six-inch mains were constructed after 1884 along Broadway Street East, north of Banfield to Grand River Street North; along all of St. Andrew Street; along Capron from St. Andrew to Banfield; and along Alexander from St. Andrew to Jane. In addition, a four-inch main was laid along Jane from Alexander to Broadway Street East. Thus, the portion of North Ward which was adjacent to Banfield and contiguous with

Quality Hill was well serviced with watermain extensions. The portion of North Ward adjacent to the Junction, on the wrong side of the Great Western Railway, was not well serviced in 1913. However, by 1924, there were new pipes laid along most of the Junction streets, particularly Jefferson, Franklin, most of Wellington, and a short section on Silver Street.

The Great Western Railway station itself had an elaborate pipe system, even in 1913 So did the Penman's mill complex on the Flats, by the Willow Street race.

The Queens Ward main system changed very little from 1884 to 1924. In fact, no new areas were serviced during this forty year period. The only change indicated by the Goad maps is a replacement of the original six-inch pipe with an eight-inch pipe, sometime before 1913, throughout the ward's piped area.

The peninsular portion of Kings Ward located between the Grand and Nith Rivers, south of Emily, experienced more change in service than Queens Ward did. The 1913 Goad map indicates that the prime pipe, along Broadway Street East, was also upgraded from a six-inch to an eight-inch service before 1913. Also by 1913, four-inch pipes had been laid along William Street from Broadway to West River; and on West River from William to Charlotte. A six-inch pipe extended on West River from Charlotte to almost Ayr Road. This is the working-class Slabtown area, dominated by Penman's #1 mill at the north end of West River Street. The 1924 Goad map shows that a further four-inch main had been added to a laneway which connected East Broadway Street with West River, passing between lots 13 and 14 on the West Side of West River Street. The commercial core on Grand River Street North, if it was excluded from the original system in 1884, was laid with a four-inch pipe sometime before 1913.

In short, before 1903, the least serviced area of town was South Ward. Between 1903 and 1924, Queens Ward's commercial core was well protected against fire, because of the eight-inch pipes which descended the 125-foot slope from the reservoir, but much of the ward had no pipes at all. In the town as a whole, most of the extensions added after 1884 serviced

the working-class areas of the Junction, Walnut Street on the Flats, and most of South Ward. The only exception was the extension laid on the newly developed lands adjacent to Quality Hill, north of Jane Street, which was a middle-class area and, perhaps, the Grand River Street North commercial core between William and Mechanic Streets.

It is no accident that working-class areas received water service and fire protection later than more affluent areas. The requirement that the revenue paid to the town from the subscribers located along a new extension equal or surpass seven percent of the town's installation cost created this bias. The schedule of water rates stated that residential users would pay a minimum of five dollars and a maximum of nineteen dollars for service, per annum, depending on the number of rooms in the subscriber's house and the number of "inmates" residing there.[42] Thus, the size of one's house became a relevant factor in determining who would receive a water service. Relevant, too, was the number of other residents on a street who wanted water. Petitions to council for water service normally were brought by a group of ratepayers from a street, all of whom sought service. The seven percent formula was then applied to the summation of all of the anticipated subscription rates to be paid by the petitioners.

A further disincentive mitigated against poorer people obtaining water service. Under bylaw #297, which regulated the Paris waterworks system, the applicant was required to pay the cost of the installation and maintenance of the service pipes which connected the applicant's dwelling to the street main.[43] By the operation of these two factors, waterworks service was available in Paris only to those who could afford additional expenses, and who had neighbours who could also.

Examples of petitioners who were rejected on the basis of their inability to produce sufficient revenue for the town can be found throughout a twenty-five year period. For example, on 14 April 1910, Mrs. Jennie Finlayson and five other ratepayers on Elgin Street (Queens Ward) were not granted water, "as revenue from same would not pay the interest on

the investment."[44] On 22 July 1901, Mr. C. Gray's application was rejected by the committee, "not being a paying investment."[45] On 20 September 1897, William Hutton's application was rejected, "the rate received not being sufficient for such service in accordance with resolution requiring 7% per annum on cost of putting in."[46] And on 4 May 1885, council accepted the committee's recommendation "that the petition from residents of South Ward for additional Fire Service Pipes be not entertained, our appropriation not allowing the additional expenditure."[47] The same rules applied to sewers as well, as an application by Ed Hayden and three others for a "water drain" on Ann and Spencer Streets in South Ward was refused, as "it would only pay 2 3/4 per cent on investment."[48] It is interesting to note that John Baker's application for water service in 1901 was "not granted as contrary to the schedule."[49]

4. THE IMPACT OF WATERWORKS ON HEALTH

It is difficult to ascertain whether the construction of the Paris waterworks system resulted in a healthier environment in which to live. The major difficulty is establishing the extent of disease in the years before the system was constructed in 1884. Certainly in the years after 1884, infectious diseases still recurred, affecting users of town water and also those who relied on wells. The provision of water without a system of sewers resulted in the construction of cesspools, which represented a danger to local water supplies through seepage. It appears that infectious diseases became less common after the turn of the century, although the death rate seems to have held steady.

The accounts of the many diseases discussed in this section collectively describe the health conditions in Paris in the late nineteenth century. However, only some of these diseases can be spread by water contamination. Cholera is totally water borne, while typhoid fever, diptheria, and diarrhea are also water related. Infant mortality rates, when available, are good indicators of the degree to which drinking water has been contaminated by sewage. Whooping cough and scarlett fever are, however, respiratory-borne bacterial diseases, and thus are not

relevant to water supply issues.

Of the Paris environment, it was written in 1883 that:

> Paris is . . . a healthy place, the malignant zymotic diseases having no record there; there is, however, a certain amount of malarial fever and rheumatism; the former caused by an undrained swamp to the north of the town, near the railway station.[50]

However, D.A. Smith writes that in Paris at this time:

> A reading of the death notices suggests that a large number, especially children, suffered from . . . measles, scarlet fever, typhus, whooping cough, diptheria, and diarrhea.[51]

Thus, the town was not without infectious diseases at the time of the creation of the waterworks. Perhaps it was this level of disease which prompted the town to establish a Board of Health in "about 1884."[52] According to D.A. Smith, this Board created many regulations, some of which required that wells and outhouses be cleaned annually, and that permission be obtained before the construction of underground cesspools.[53] Still, in 1885:

> A few isolated cases of typhoid and scarlet fever occurred . . . but whooping cough has not entered the town . . . Malaria showed a marked decrease.[54]

It would appear that the regulations pertaining to annual cleanings of privy pits were not enforced. In 1897, for example, Dr. Dunton, the Paris Medical Health Officer, reported that "during the year 58 pits have been emptied,"[55] and in 1898 that "forty-five pits have been emptied by the sanitary contractor."[56] However, in 1893, there was a total of 430 privy pits in Paris.[57] The adoption of the flush toilet, or water closet, created the need for cesspools by 1892, at which time Dr. Dunton reported that:

> Four cesspools have been sunk in various parts of the town into which closets, sinks, etc. are emptied. In each case, they have been constructed according to the most approved plan, and by competent workmen.[58]

By 1893, there were "7 flush closet and cesspools."[59] Although various short segments of sewer had been installed beginning in 1901,[60] most of the town was without them even as late as the 1960s, according to current Paris Public Utility officials. (Septic tanks were widely used, though.) In 1916, Dr. Logie, the successor to Dr. Dunton as Paris' Medical Health

Officer, reported:

> The want of a sewerage system and lack of a general collection of garbage are the two main causes which lead to trouble [with disease] and I would recommend to our Town Council to take into their serious consideration the remedying of these defects.[61]

Even though only a small proportion of Parisians received water service in the early years, the amount of waste water they produced was likely significant, especially so as there were few sewers. Of Paris water consumers in 1902, W.A. McLean wrote:

> The supply is found sufficient except during seasons of greatest consumption. These periods are in severe winter weather, when it is not uncharitable to suppose that a good many taps are left open to prevent water freezing in the pipe; and during midsummer draught . . . For carelessness in leaving taps open, after proper warning, a penalty is the only remedy. Such means as these will generally be found necessary, sooner or later, in the history of every waterworks system. If adopted at the present time in Paris, there is much probability that a saving in the coal bill [at the pumphouse] would result, while an increase in the water supply would not be so urgent.[62]

Though the 1916 recommendation for a sewer system was ignored, in 1917 the call for a regular system of garbage collection was answered.[63] A concern for health was also expressed by town council's passing of bylaw #654 in December 1918, which gave the town the power to:

> compel the use of water supplied from the waterworks of this Municipality for drinking and domestic purposes and to prohibit the use within the Municipality of spring or well water for such purposes.[64]

This bylaw was passed "owing to the contamination of water coming from springs or wells in the Town of Paris."[65] This power was to be invoked:

> whenever the Board of Health or the Medical Health Officer shall consider the use of spring water to be prejudicial to the health of the community or any citizen or citizens of the Town of Paris.[66]

This bylaw breached the promise in 1882 that waterworks subscription would not be compulsory, although the poor quality of well water may have necessitated this breach. Well water samples from Paris had been found to be "not pure" as early as 1895, when they contained "270 colonies of bacteria per cubic centimeter," according to an analyst from the provincial Board of Health.[67] The town's piped water was found to have "140 colonies" at this

time.[68] Dr. Dunton's report of 1899 on the quality of the town's piped water is unavailable, but an interesting reference to it is found in the Paris council minutes of 11 September 1899:

> Moved by Mr. Stroud, Seconded by Mr. Brockbank:
> That the report of Dr. Dunton be placed on file, the information contained therein being not quite correct, there being at present about ten feet of water in the reservoir, clear and pure and as fit for drinking and other purposes as it has been for many years. There is nothing whatever in connection with the water to cause alarm as to either quality or quantity.

[Henry Stroud was the manager of the Paris Wincey Mills, and in 1902 he chaired the waterworks committee.[69] Several Brockbanks, namely John, David, and Richard, held various positions on town council and on the waterworks committee.]

In 1908,

> A sample of the water in the well on West River street was sent to the provincial laboratory for analysis, and reported to be unfit for drinking purposes, and your Board ordered the well to be filled up, which was done under the supervision of Street Commissioner Brockbank.[70]

Contagious diseases still existed in Paris after the construction of the waterworks system, and the mortality rate did not decline, as Table 5.8 shows. The earliest available health report, written by Dr. Dunton in 1891, states that:

> Scarlet fever, diptheria, and typhoid fever have been more prevalent than for a number of years. Shortly before midsummer holidays, scarlet fever broke out in the North Ward, and spread rapidly . . . Generally the diptheria cases in our town are of a mild type. Typhoid fever has been prevalent during the Fall and Early Winter to an alarming extent. In all there were twenty-two cases, with four fatal terminations. Nearly all the cases were in Upper Town, seven of them being on Dumfries Street. So far, I have been unable to ascertain the cause of so much fever . . . The Town supply has been analyzed and is found pure.[71]

It is possible that the cases of typhoid on Dumfries Street resulted from the common use of a single public well. Such wells may have been contaminated either by seeping sewage, or from impurities which entered the well through the users themselves.

Dr. Dunton also referred to a problem which persisted for a full decade, pertaining to the keeping of hogs on railway lands near the Junction:

TABLE 5.8

OCCURRENCE OF SELECTED CONTAGIOUS DISEASES AND TOTAL MORTALITY IN PARIS, ONTARIO, 1890-1916

Year	Cases of Typhoid Fever	Cases of Diptheria	Cases of Scarlett Fever*	Total # of Deaths by All Causes	Mortality Rate/1,000 Population
1890	23	n/a	n/a	n/a	n/a
1891	22	n/a	n/a	n/a	n/a
1893	1	3	18	27	9.0
1895	9	1	0	39	12.8
1896	2	6	1	37	12.0
1897	1	2	10	40	13.0
1898	3	7	4	27	8.8
1901	0	0	4	49	15.0
1908	"a few"	2	2	61	?
1910	0	2	2	51	13.2
1911	?	3	?	52	?
1916	1	2	?	48	11.2

Source: Reports of the Medical Health Officer, in Abstract of Paris Receipts and Expenditures, 1893-1917.

* Scarlett fever is not a disease which is communicated by contaminated water. Typhoid fever, diptheria, and diarrhea are spread by contaminated water. Unfortunately, detailed statistics on cases of diarrhea are not available.

> The G.T.R. stock shipping yards have given rise to much complaint. During the hot days in summer when hogs are confined in the yards, the residents in close proximity suffer.[72]

This problem continued until 1901, when Dr. Dunton wrote:

> The G.T.R. stock pens have at last been removed from Banfield Street to a point north of the railway, agreed upon by Dr. Bryce, Secretary Provincial Board of Health, and the G.T.R. Co.[73]

This stockyard on Banfield was probably at lot 22 on the south side, which in the 1881 Paris tax assessments was billed to the Grand Trunk Railway Co. This lot is on the corner of Banfield, Market and Capron Streets, on the fringe between Quality Hill and the Junction. Perhaps it was this noxious use which caused the 1891 scarlet fever epidemic in North Ward, and the whooping cough which was "prevalent in the North Ward" in the fall of 1895.[74] The minutes of the Paris Hydro-Electric and Water Commission of 5 May 1915 indicate that this stockyard was moved to Spruce Street, which is in the working-class area of North Ward, and further away from Quality Hill.

Also in 1895, the Flats had a typhoid outbreak, and also a problem with stagnant, dirty water in the adjacent raceway. Dr. Dunton, though, thought there was no causal connection:

> Typhoid fever has been more prevalent this year than since 1890 when 23 cases were reported; this year 9 cases have been reported with 3 deaths. Six of the cases were bunched together in four houses on the Flats within a stone-throw of each other; from this it would appear that the cause is a local one. Six of the parties who had the fever used town water, of these two died. Three used well water, one of these died - the same percentage of deaths in each case . . . There is general prejudice against the unused end of the Race on the Flats by those residing in that vicinity. The dirt and decaying vegetable matter in it are said to drift down to the said end and when the water is low and the weather is warm it gives rise to foul smells. While the accumulations of dirt in the race are not likely to cause typhoid it is reasonable to suppose that it might be the source of malarial troubles, therefore I would suggest that the Race Company be asked to close and drain that portion of the race which can be dispensed with and that the other part be cleaned out in the spring.[75]

In 1896, Dr. Dunton reported that "the south end of the race on the Flats has been cut off and drained as promised by the Company one year ago."[76]

The mysteriously large volume of water consumed in Paris probably resulted from

inordinately high usage by industries and the railways. Town council encouraged this state of affairs by granting railways and industries free or cheap water, and by not insisting on the use of meters. In 1900, when the waterworks committee instituted for the first time unfavourable policy changes regarding industrial water usage, Penman and his associates responded by prompting the placement of control over waterworks in a depoliticized, bureaucratic commission. Upper-class residential areas clearly received better and earlier waterworks service than did lower-class residential areas. This pattern, too, was encouraged by council through their adoption of the "seven per cent" rule which applied to applications for extensions of water service. This industrial and upper-class bias is supported in theory by Marx's statements regarding the primacy of the needs in the realm of production, and regarding the struggle among social classes. The joining of the South Ward water extension issue with that of the handouts for Penman's Paris Plow Works was typical of the sort of manipulative tactics used by Paris council. The illegal industrial water contracts denounced by Councillor Patterson in 1900 are evidence of a conspiracy between Paris industries and the local political elite to favour the owners of the means of production in the years before 1900. It may be interesting to note that Councillor Patterson was married to John Baker's daughter![77]

NOTES

1. W.A. McLean, "Waterworks, Electric Lighting, Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902).

2. Ibid.

3. Ibid.

4. Ibid.

5 Consolidated Municipal Act, 1903, Statutes of Ontario 3 Edw. 7, chapter 19, section 71(a)(1).

6. Minutes of the Paris Council, 19 March 1900.

7. Ibid., 2 April 1900.

8. Minutes of the Paris Waterworks Committee, 5 April 1900.

9 Paris Star-Transcript, 8 January 1902.

10. Minutes of the Paris Council, 28 March 1904, and 24 Janaury 1905.

11. Ibid., 12 May 1902.

12. Ibid.

13. Ibid.

14. Paris Bylaw #618, 28 August 1916.

15. Paris Star-Transcript, 3 September 1902.

16. Minutes of the Paris Water and Light Commission, 6 December 1909.

17. Minutes of the Paris Hydro Electric and Water Commission, 17 May 1916.

18. Ibid., 13 December 1915.

19. Minutes of the Paris Public Utilities Commission, 6 March 1934.

20. Minutes of the Paris Water and Light Commission, 6 December 1909.

21. Minutes of the Paris Public Utilities Commission, 4 April 1939. This resolution states that meters are being made compulsory in order "to more adequately provide for a continued and abundant supply of pure and wholesome water to the inhabitants of the Town of Paris and to prevent waste of such water and to more equitably set the rates charged the different classes of customers of the said Commission.

22. Minutes of the Paris Council, 10 February 1890.

23. Picturesque and Industrial Galt (1902). No other publishing details are given in this publication, which is available at the City of Cambridge Archives.

24. M.N. Baker, ed. The Manual of American Waterworks, fourth issue (New York: The Engineering News Publishing Co., 1897), 596-608.

25. Ibid.

26. Ibid.

27. Minutes of the Paris Council, 21 December 1891.

28. Ibid.

29. Ibid., 15 December 1891.

30. Ibid., 15 December 1892.

31. Paris Review, 28 December 1892.

32. Paris Bylaw #393, 11 September 1899.

33. Paris Bylaw #460, 8 June 1903.

34. Paris Star-Transcript, 20 August 1902.

35. Ibid., 10 September 1902.

36. Ibid., 3 September 1902.

37. Ibid., 20 May 1903.

38. D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 126.

39. Registered Plan of Subdivision #492, County of Brant Land Registry Office, Brantford, Ontario. Registered January, 1932.

40. Ibid.

41. Ibid.

42. Paris Bylaw #297, 16 December 1889. See the Schedule on page 11.

43 Ibid., ss. 8, 9.

44. Minutes of the Paris Water and Light Commission, 14 April 1910.

45. Minutes of the Paris Waterworks Committee, 22 July 1901.

46. Ibid., 20 September 1897.

47. Minutes of the Paris Council, 4 May 1885.

48. Minutes of the Paris Water and Light Commission, 16 July 1908.

49. Minutes of the Paris Waterworks Committee, 22 July 1901.

50. History of Brant County (Toronto: Warner, Beers and Co., 1883), 487.

51. D.A. Smith, At the Forks of the Grand, vol. 2 (Paris, ON: Paris Public Library Board, 1982), 190-1.

52. Ibid., 13.

53. Ibid.

54. "Report of the Medical Health Officer," The Brant Review, 21 November 1885, in D.A. Smith, At the Forks of the Grand, vol. 2, 13-4.

55. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1897, 21.

56. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1898, 18.

57. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1893, 21.

58. Paris Review, 28 December 1892.

59. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1893, 21.

60. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1901, 16.

61. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1916, 19.

62. W.A. McLean, "Waterworks, Electric Lighting, Sewerage."

63. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1917, 20.

64. Paris Bylaw #654, 18 December 1918.

65. Ibid.

66. Ibid.

67. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1895, 18.

68. Ibid.

69. W.A. McLean, "Waterworks, Electric Lighting, Sewerage."

70. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1908, 19.

71. Minutes of the Paris Council, 15 December 1891.

72. Ibid.

73. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1901, 16.

74. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1895, 18.

75. Ibid., 18-9.

76. "Report of the Medical Health Officer," Abstract of Paris Receipts and Expenditures 1896, 20.

77. Paris Review, 8 February 1917.

CHAPTER 6

WHO PAID FOR THE PARIS WATERWORKS SYSTEM?

1. INTRODUCTION

The financing of the Paris waterworks system typified nineteenth-century waterworks developments A combination of public subsidies and user fees enabled the wealthy to obtain water service at a reduced cost. The public subsidy took the form of sums taken from the general town revenues in order to repay the debentures which financed most of the waterworks infrastructure. The general town revenue account was comprised of taxes paid in respect of land, buildings, equipment, chattels, and some forms of income, at a uniform mill rate, except for a few privileged enterprises. In absolute terms, the rich in Paris paid more money into general town revenues that did the poor, but in relative terms, each paid approximately in proportion to the value of their assets. Thus, whether there was social equity in terms of the contribution of the social classes to this account depends on whether one's definition of equity is relative or absolute.

It is clear from Chapter 5 that the wealthy received better water service than did the poor. It is therefore clear that there was no equity in the relative sense: in spite of the fact that all paid the same two percent (20 mills) of tax, for example, the social classes received differing benefits. There was, arguably, equity in the absolute sense: the wealthy paid the bulk of the tax, and therefore legitimately received most of the benefits. In Marxist theory, it is to be expected that equity would have to be given this definition. Capitalist democracy means not that each individual has a right to equal benefits, or to equal power over benefit distribution; instead, power and benefits reside within the propertied class.

There was an uneven spatial pattern in the distribution of the propertied class in Paris. Certain wards were more affluent, and thus paid more tax, than others, and there were discernible zones of affluence related to functional zonation (land use) as well. These areas of affluence received waterworks service at the earliest dates, and were generally serviced with the thickest pipes.

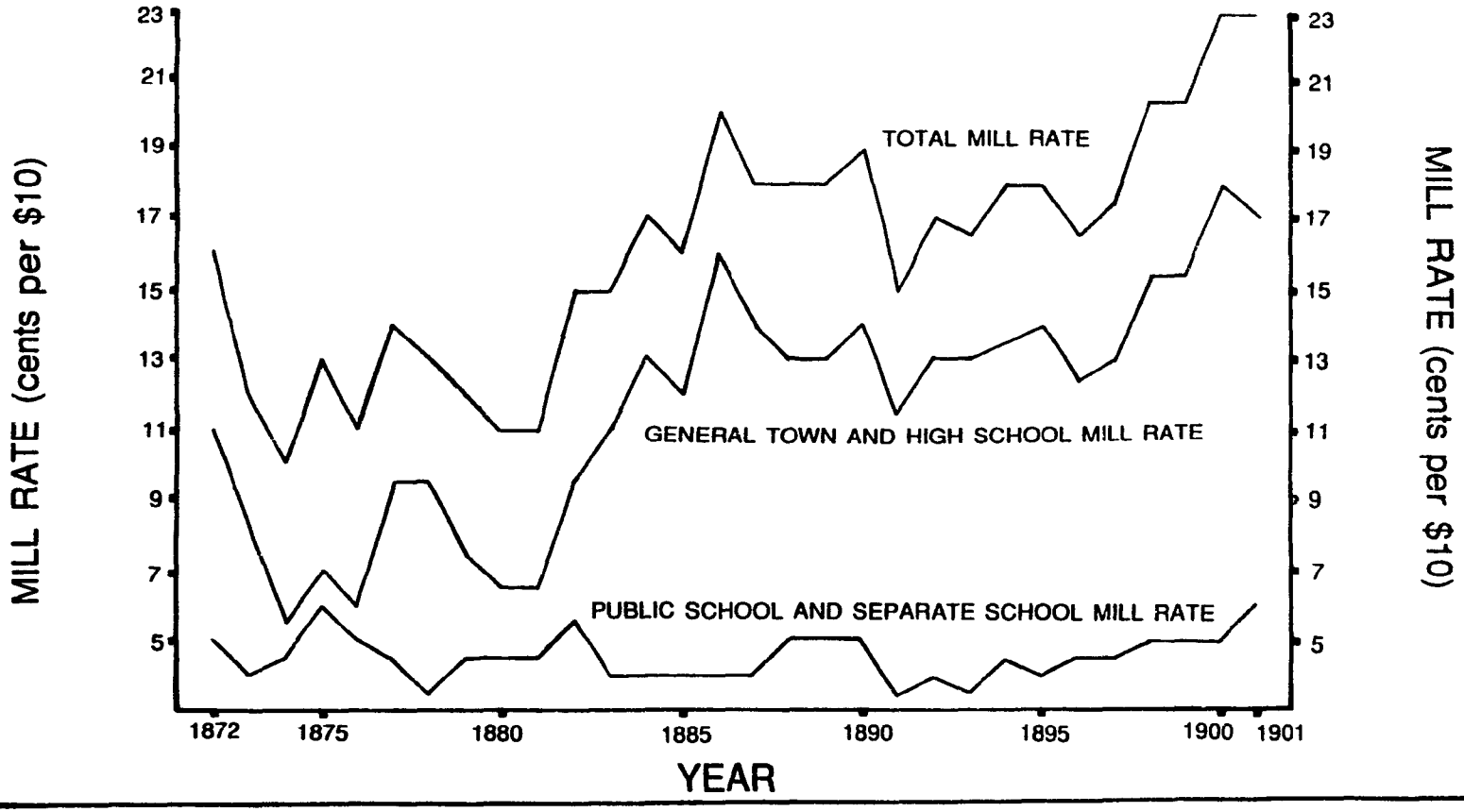
Finally, it is not true that the waterworks system paid for itself. This conclusion must necessarily follow if it is asserted, as it is here, that the cost of water subscription was subsidized. The cost of the system greatly exceeded the 1882 estimates procured by the town, and the rate of taxation in the following years rose sharply. (See Figure 6.1 for the applicable mill rates in Paris from 1872-1901.) As well, the capabilities of the originally planned system were less than they were touted to be, necessitating further expense. Though data concerning any reduction in insurance costs as a result of waterworks construction is not available, this is of no consequence. It was not equitable if, for example, among Parisians, $1,200 which would otherwise have been spent on fire insurance was instead paid to the town in taxes. In the former case, the payment was an optional one, paid by members of a class who both owned property and who saw fit to insure it. In the latter case, a compulsory payment was required of everyone owning property of any value. Further, fire insurance premium rates were low for residential property owners, while commercial property owners paid a rate which was almost double, and industrial owners paid a rate which was as much as ten times that paid by residential owners. This progressive system of insurance ratings was replaced by the flat municipal tax, which applied equally to all land use types.

2. WHO PAID MUNICIPAL TAX IN PARIS IN 1881?

In Paris in 1881 (the last fiscal year before the passing of the waterworks bylaw), municipal taxes were based on the value of three different categories of property. These were

FIGURE 6.1:PARIS PROPERTY TAX ASSESSMENT MILL RATES, 1872-1901

SOURCE: Town of Paris Annual Expenditure Bylaws (Paris Municipal Office)



referred to as real property, personal property, and taxable income. Real property was defined by provincial legislation as:

> all buildings or other things erected upon or affixed to the land, and all machinery or other things so fixed to any building as to form in law part of the realty, and all trees or underwood growing upon the land, and all mines . . . except mines belonging to Her Majesty.[1]

Personal property was defined as:

3

> all goods, chattels, shares in incorporated companies, interest on mortgages, dividends from bank stock, money, notes, accounts and debts at their actual value, income and all other property . . . except property herein expressly excepted.[2]

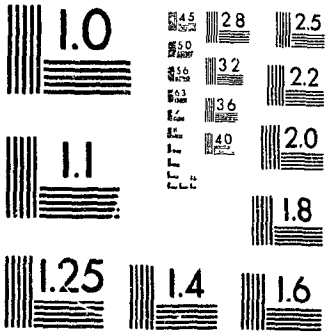
Though income was defined as personal property, it was listed in a separate column in the tax assessments,[3] and was subject to its own rules. For example, taxable income was defined as income "from any trade, calling, office, profession or other source whatsoever, not declared exempt" by the Assessment Act.[4] Persons with annual incomes of less than $400 were exempted from paying tax under this heading.[5] Other personal property was subject to only a $100 exemption.[6] Among other significant exemptions were ones regarding the "income of a farmer derived from his farm, and the income of merchants, mechanics, or other persons derived from capital liable to assessment."[7] Regardless of the category of taxation, all taxable items were to be assessed at the same rate by the municipality. This was required by the same provincial statute as prescribed all the provisions above. It stated:

> All municipal, local or direct taxes or rates, shall, where no other express provision has been made in this respect, be levied equally upon the whole rateable property, real and personal, of the Municipality or other locality, according to the assessed value of such property, and not upon any one or more kinds of property in particular, or in different proportions.[8]

In 1881, the total value of all taxable property in Paris was $1,014,205.[9] The values of the three categories of property were as follows: real property, $863,143; personal property, $131,702; taxable income, $19,360. The mill rate in effect for that year was 11 (1.1 cents on

3 of/de 3

PM-1 3½"x4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT



PRECISION[SM] RESOLUTION TARGETS

PIONEERS IN METHYLENE BLUE TESTING SINCE 1974

Micro-D

14000 COUNTY ROAD 5 BURNSVILLE MN 55337 USA
TEL 612 435 7881 FAX 612 435 7887 TLX 910606948

the dollar of assessed value), which would have produced $11,156 for the town if no one defaulted on paying their taxes.

It can be seen that the tax received from the category of taxable income was almost negligible, as it would have totalled only $212.96 of revenue ($19,360 X .011). As the Assessment Act excluded merchants and others who earned their annual income from tax assessable property, most of the persons who paid this tax were those who provided professional services. Industrialists, such as John Penman, paid no tax under this heading, neither personally nor in respect of their firms.[10] Those who were assessed under this heading included, among others:

TABLE 6.1

EXAMPLES OF PAYERS OF MUNICIPAL INCOME TAX

NAME	PROFESSION	VALUE OF TAXABLE INCOME
Peter Cox	Gentleman	$1,500
Wyndham Channer	Railway Auditor	$ 500
Robert Hall	Carpenter	$ 100
Oliver Whitby	Accountant	$ 200
Dr. Miles O'Reilly	Physician	$ 200
Thomas McCosh	Travelling Agent	$ 400
Robert Robertson	Station Master	$ 400
Andrew Philip	Knitter	$ 200
Dr. William Clark	Physician	$ 200

SOURCE: Town of Paris Property Tax Assessments, 1881. (Archives of Ontario)

All of the above lived in North Ward, which possessed the highest value of taxable income of all the wards. By ward, the value of assessed property in Paris for all three categories in 1881 was as follows:

TABLE 6.2

VALUE OF ASSESSED PROPERTY BY WARD, PARIS, ONTARIO, 1881

TYPE OF PROPERTY	SOUTH WARD	QUEENS WARD	KINGS WARD	NORTH WARD	TOTAL
Real Property	$106,445	$116,035	$366,975	$273,688	$ 863,143
Personal Property	1,852	11,260	89,000	29,590	131,702
Taxable Income	2,060	1,900	7,325	8,075	19,360
TOTAL	110,357	129,195	463,300	311,353	1,014,205
Population	761	609	824	868	3,062

SOURCE: Town of Paris Property Tax Assessments, 1881. (Archives of Ontario)

The category of personal property, which entailed primarily goods and the profit from investments, was more significant in generating tax revenue than the taxable income mechanism. Merchants and industrialists were most frequently among those who paid this tax, as Table 6.3 shows:

TABLE 6.3

MAJOR PAYERS OF PERSONAL PROPERTY TAX IN PARIS BY WARD, 1881
(minimum value of $1,000)

NAME	PROFESSION	ADDRESS	VALUE
NORTH WARD			
Travers and Taylor	Merchants	E. Side, Market St. lots 1-5	$ 1,200
George Hoffman	Merchant	E. Side, Market St. lots 2,3	1,700
Joseph Schaeffer	Merchant	E. Side, Market St. lots 4,5	1,400
John Penman	Manufacturer	W. Side, West River St.	18,000
Peter Cox	Gentleman	N. Side, Banfield St. lot 13	1,000
Dr. Cooke	Physician	E. Side, Broadway St.lots 18,19	1,500
KINGS WARD			
George Laing	Merchant	E. Side, Grand River St. N. lot 4	$ 1,000
George Scott	Druggist	" lot 5	4,000
John Finlayson	Merchant	" lot 5	1,500
James Cameron	Merchant	" lot 5	4,500
William Duncan	Stationer	" lot 6	1,000
Wood and Young	Tailors	" lot 6	1,000
Roper Galloway	Merchant	" lot 6	2,000
C.H. Roberts	Druggist	" lot 7	1,000
John McMillan	Lawyer	" lot 8	1,000
John McRae	Shoe Dealer	" lot 8	1,200
Wm. Robinson	Merchant	" lot 8	2,000
Alfred Watts	Merchant	W. Side, Grand River St. N. lot 4	7,000
Buckley & Brockbank	Stove Dealers	" lot 5	1,500

Best and Palmer	Furniture	" lot 6	1,500
Young and Young	Grocers	" lot 6	1,000
Whitlaw, Baird & Co.	Millers	" lots 6-8	1,000
David Patton	Merchant	" lots 8,9	1,600
John Chase	Druggist	" lot 9	1,100
Horace Huson	?	E. Side, Broadway St. lot 10	1,700
James Lloyd	?	W. Side, Broadway St. lot 11	1,000
Thos. O'Neal	Miller	Elm Street, lots 36-38	1,200
David Maxwell	Agricult. Mfg.	" lots 39-42	8,000
Adams & Hackland	Woolen Mill	" lots 43-45	12,000
Otto Sauermann	Wood Turner	" lots 46-48	2,000
Brown and Allen	Nut & Bolt	" lots 49-51	5,000
Turnbull & Thomson	Builders	" lots 52-55	1,600

QUEENS WARD

John Proper	Grocer	E. Side, Dumfries St. lot 5	$ 1,000
Wm. & John Miller	Merchants	" lot 8	1,100
N.P. Benning	Tobacco Mfg.	" lot 8	2,500
Thomas Hall	Customs Office	W. Side, Burwell St. lot 8	1,200

SOUTH WARD

none

SOURCE: Town of Paris Property Tax Assessments, 1881. (Archives of Ontario)

These figures confirm the existence in 1881 of a large commercial core along Grand River Street North, between the forks and William Street, and smaller commercial areas at the junction on Market Street, and in upper town on Dumfries Street. Industry is concentrated along the Willow Street race, with single mills on West River (Penman's), Grand River Street North (Whitlaw, Baird and Co.), and Dumfries Street (N.P. Benning). (See Map 6.1 for the location of industrial and commercial land uses in Paris in 1881.) Cumulatively, the above listed merchants and manufacturers, all of whom had personal property assessed at $1,000 or more, possessed and paid tax on 73.6 percent of all the taxable personal property in Paris in 1881 ($97,000 of a total of $131,702.)

The largest source of revenue, by far, was real property taxation. This category also included the value of all buildings, equipment and other fixtures, whether residential, commercial or industrial. The disparity between the wards is not as pronounced in this category as in the personal property category. For example, comparing the assessed real property of Kings Ward to South Ward, a ratio of 3.4 to 1 results ($366,975 to $106,445), whereas the ratio for these wards' assessed personal property values is 48 to 1 ($89,000 to $1,852). As a result, the amount of real property tax paid by all of the residents of low-class South Ward was greater than the amount of personal property tax paid by all of the merchants, industrialists and other residents of Kings Ward in 1881 ($106,445 to $89,000). However, within the category of real property, the wards of lower town still paid more tax than the upper town wards. Merchants and industrialists again contributed much to this category of assessment, as Table 6.4 shows.

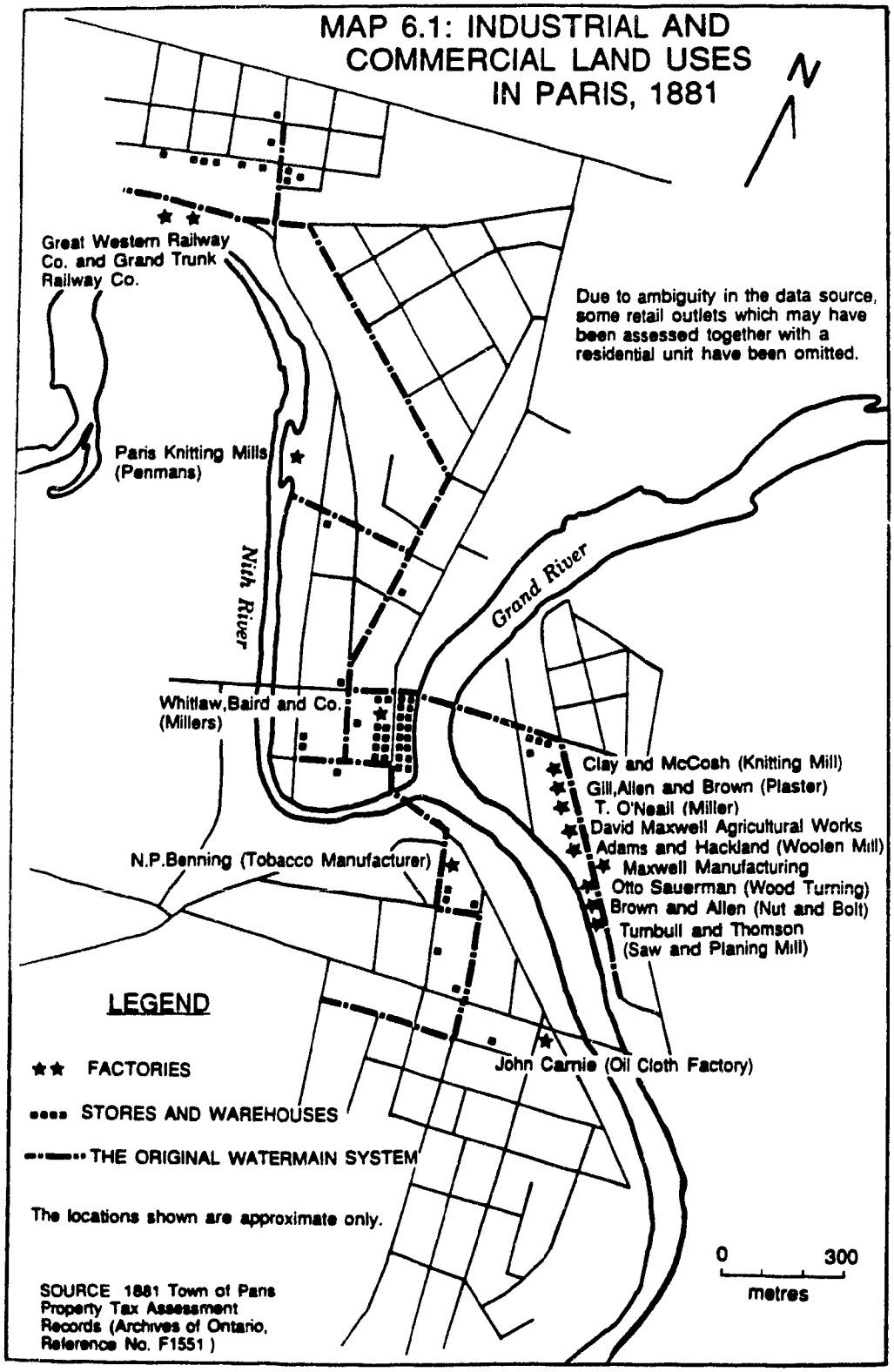

MAP 6.1: INDUSTRIAL AND COMMERCIAL LAND USES IN PARIS, 1881
N
Great Western Railway Co. and Grand Trunk Railway Co.
Due to ambiguity in the data source, some retail outlets which may have been assessed together with a residential unit have been omitted.
Paris Knitting Mills (Penmans)
Nith River
Grand River
Whitlaw,Baird and Co. (Millers)
Clay and McCosh (Knitting Mill)
Gill,Allen and Brown (Plaster)
T. O'Neail (Miller)
David Maxwell Agricultural Works
Adams and Hackland (Woolen Mill)
Maxwell Manufacturing
Otto Sauerman (Wood Turning)
Brown and Allen (Nut and Bolt)
Turnbull and Thomson (Saw and Planing Mill)
N.P.Benning (Tobacco Manufacturer)
LEGEND
FACTORIES
STORES AND WAREHOUSES
THE ORIGINAL WATERMAIN SYSTEM
The locations shown are approximate only.
John Carnie (Oil Cloth Factory)
0
300
metres
SOURCE 1881 Town of Paris Property Tax Assessment Records (Archives of Ontario, Reference No. F1551)

TABLE 6.4

MAJOR PAYERS OF REAL PROPERTY TAX BY WARD, PARIS, ONTARIO, 1881
(minimum assessed value of $2,500)

NAME	PROFESSION	ADDRESS	VALUE
NORTH WARD			
George Angus	Assessor	N. Side Banfield St. lots 12,13	$ 2,700
Wyndam Channer	Railway Auditor	" lot 15	2,500
Jane Randall	?	" lots 16,17	4,500
Leonard Sovereign	?	N. Side Jane St. lot 13	3,000
Travers & Taylor	Merchants	E. Side Market St. lots 1-5	3,100
Mrs. Milton	?	S. Side Spruce St. lots 1,2	2,600
Great Western Ry.	Railway	City of Hamilton	19,725
Grand Trunk Ry.	Railway	City of Montreal	12,440
John Penman	Manufacturer	W. Side West River St.	35,750
Dr. S. Cooke	Physician	E. Side Broadway St. East lots 18,19	3,200
Turnbull & Thomson	Builders	W. Side Grand River St. North lot 23	2,800
Charles Whitlaw	Miller	W. Side Grand River St. North blocks B,C	5,000
Andrew Baird	?	W. Side Grand River St. North blocks C,D	4,500
Banfield Capron	Gentleman	E. Side Grand River St. North	7,000
KINGS WARD			
Frank Mitchell	Grocer	E. Side Grand River St. North lot 3	$ 3,500
George Laing	Merchant	" lot 4	2,600
John Finlayson	Merchant	" lot 5	2,600
James Cameron	Merchant	" lot 5	2,600
Roper Galloway	Merchant	" lot 6	2,800

William Robinson	Merchant	" lot 10	3,000
John Baker	Innkeeper	" lot 11	4,000
Mrs. Hamilton	?	" lot 11	6,000
Hugh Finlayson	Tanner	W. Side Grand River St. North lots 1,2	6,500
Alfred Watts	Merchant	" lot 4	2,500
John Carnegie	Banker	" lot 6	2,600
Whitlaw, Baird & Co.	Millers	" lots 6-8	20,000
O.D. Bradford	Hotelkeeper	" lots 10,11	4,100
Dr. William Burt	Physician	" lots 9,10	2,800
David Maxwell	Manufacturer	W. Side Walnut St. lots 15,16	3,000
Clay & McCosh	Manufacturers	Elm St. lots 26-30	5,340
Gill & Allen	Plaster Merchants	" lots 31-35	6,420
Thomas O'Neal	Miller	" lots 36-38	8,420
David Maxwell	Agricultural Mfg.	" lots 39-42	16,900
Adams & Hackland	Woolen Mfg.	" lots 43-45	18,380
Otto Sauerman	Wood Turner	" lots 46-48	4,100
Brown & Allen	Nut and Bolt	" lots 49-51	3,880
Turnbull & Thomson	Builders	" lots 52-55	6,120

QUEENS WARD

John Dickson	Gentleman	E. Side Grand River St. South lot 16	$ 2,700
Mrs. Curtiss	?	W. Side Arnold St. lot 2	3,000
Charles Arnold	Nurseryman	S. Side Church St. lots 3-5	3,140
Stephen Dadson	Teacher	E. Side Barker St. lots 3-5	2,500

SOUTH WARD

H.A. Bainslaugh	Lightning Rod Agent	E. Side, Washington St	$ 3,000
John Shannon	Farmer	?	3,100
W.C. Jones	Farmer	?	3,100

SOURCE: Town of Paris Property Tax Assessments, 1881. (Archives of Ontario)

This list confirms the previously discussed social geography and functional zonation of Paris in 1881. Further, the cumulative total of the real property values assessed to these forty-four owners of real property worth more than $2,500 is $267,575. Though this is a sizeable sum, it is only thirty-one percent of the assessed value for all of the real property in Paris at that time. Thus, the elite of the town did not dominate this category of taxation to the extent that they did the categories of taxable income and personal property. This reflects the fact that many persons in Paris owned real estate (even members of the lower class), while fewer had sizeable mercantile inventories, or investments, or businesses, or high annual salaries from a profession. In fact, in 1881, there was a total of 582 taxed residential properties. By ward, the total value of residential property in Paris in 1881 was as follows:

TABLE 6.5

ASSESSED VALUE OF RESIDENTIAL PROPERTY BY WARD IN PARIS, ONTARIO, 1881

WARD	ASSESSED VALUE OF RESIDENTIAL PROPERTY	TOTAL NUMBER OF DWELLINGS	ASSESSED VALUE OF NON-RESIDENTIAL REAL PROPERTY	% OF ALL REAL PROPERTY WHICH IS RESIDENTIAL (based on $ value)
NORTH	$158,750	165	$114,938	58.00
KINGS	154,025	163	212,950	41.97
QUEENS	94,700	108	21,335	81.61
SOUTH	84,700	146	21,745	79.57
TOTAL OF ALL WARDS	492,175	582	370,968	57.02

SOURCE: Town of Paris Property Tax Assessments, 1881. (Archives of Ontario)

3. TAXATION IN PARIS AFTER 1881

After the passing of the Paris waterworks bylaw in May 1882, the mill rate of taxation increased greatly. The first notable increase occurred as early as the summer of 1882, just months after the passing of the bylaw. Also of significance was the practice of granting tax reductions and exemptions to certain local industries. This practice had begun during the depression of the mid 1870s. However, by the late 1880s, the practice reappeared without a precipitating economic crisis. Thus, during the thirty years between 1882 and 1912 (the period during which the initial waterworks debt of $30,000 was to be repaid), there was an increase in the amount of tax collected in Paris, and a change in the proportion of that tax paid by the various social classes.

The amount of tax payable by an owner of land in Ontario to the local municipal government was determined by the mill rates established by that municipality for a given year.

This system of taxation was dictated by provincial legislation which required that municipal taxes be "calculated at so much on the dollar upon the actual value of all the real and personal property liable to assessment therein."[11] A "mill" is meant to represent one part per thousand Thus, a "mill" rate of 11 equals 11 cents per 1,000 cents, or 1.1 cents on the dollar In Paris, there were normally two mill rates payable. The first was the General Town and High School (GTHS) mill rate, which was always the greater of the two. The second was the Public School and Separate School (PSSS) mill rate. In some years, the public school and separate school rates were slightly different (i.e., Catholics and Protestants paid slightly different rates of tax), but most often they were identical. All property owners paid both of these mill rates, except certain manufacturers who were exempted from the GTHS rate, and sometimes even from the PSSS rate, too.

The mill rate was multiplied by the assessed value of the property, and the product was the amount of tax due to the town. If in succeeding years the value of the property in town increased, then the same mill rate would result in a greater amount of tax being assessed. However, the value of all taxable property in Paris, from all three categories of tax, was stable from 1881 to 1901. It varied between $1,014,205 in 1881,[12] and $1,000,415 in 1901.[13] The PSSS mill rate was reasonably stable, at 4.6 in 1881,[14] and 6.0 in 1901.[15] But the GTHS mill rate jumped from 6.4 mills in 1881,[16] to 17.0 mills in 1901.[17] The total tax received by the town in 1881 would have been about $11,156,[18] while in 1901 it was $22,314[19].

As for debt, the Town of Paris owed $3,697 in 1881,[20] and by 1901 owed $68,318.[21] Most of this later debt related to waterworks, electricity, and bridge construction, in that order.[22] But at the same time as debt and mill rates increased, many tax reductions were given to manufacturers. This trend began in 1876 when six of the major employers in town were given tax breaks by bylaw #145. The terms of this bylaw were as follows:

TABLE 6.6

PARIS FACTORIES WHICH RECEIVED TAX REDUCTIONS FROM BYLAW # 145

FACTORY NAME	ASSESSED VALUE	TERMS OF TAX REDUCTION
Paris Foundry (David Maxwell)	$6,670	Exempted from 4/5 of their tax payable in 1876, 3/5 in 1877, 2/5 in 1878, and 1/5 in 1879.
Clay and McCosh Knitting Factory	12,000	Exempted from 3/5 of their tax payable in 1876, 2/5 in 1877, and 1/5 in 1878.
Brown and Allen (Nut and Bolt)	6,900	Exempted from 2/5 of their tax payable in 1876, and 1/5 in 1877.
Paris Knitting Mills (John Penman)	10,000	Exempted from 3/5 of their tax payable in 1876, 2/5 in 1877, and 1/5 in 1878.
Adams & Hackland (Knitting Factory)	9,000	Exempted from 3/5 of their tax payable in 1876, 2/5 in 1877, and 1/5 in 1878.
John Carnie & Co. (Oil Cloth Factory)	2,700	Exempted from 3/5 of their tax payable in 1876, 2/5 in 1877, and 1/5 in 1878.

An interesting aspect of bylaw #145 is that the tax reduction years coincided with a rise in the mill rates, and by 1880, when the reductions expired, the mill rates returned to their 1876 level:

TABLE 6.7

MILL RATES IN PARIS, 1876-1880

YEAR	GENERAL TOWN AND HIGH SCHOOL MILL RATE	PUBLIC AND SEPARATE SCHOOL MILL RATE	TOTAL
1876	6.0	5.0	11
1877	9.5	4.5	14
1878	9.5	3.5	13
1879	7.5	4.5	12
1880	6.5	4.5	11

SOURCE: Town of Paris bylaws # 147, 155, 169, 175, and 188.

Thus, while the reductions were in effect, all of the other taxpayers in Paris had to pay more tax in order to make up for the savings by these six enterprises. There was a lull in 1881 when the total rate stayed the same at 11.0 mills.[23] But in the five years after the passing of the waterworks bylaw, the rate rose again:

TABLE 6.8

MILL RATES IN PARIS, 1882-1886

YEAR	GENERAL TOWN AND HIGH SCHOOL MILL RATE	PUBLIC AND SEPARATE SCHOOL MILL RATE	TOTAL
1882	9.5	5.5	15.0
1883	11.0	4.0	15.0
1884	13.0	4.0	17.0
1885	12.0	4.0	16.0
1886	16.0	4.0	20.0

SOURCE: Town of Paris bylaws # 212, 223, 230, 239, and 252.

Thus, taxes rose 82 percent (since the mill rate increased from 11 to 20) in the five years between 1881 and 1886. It appears that the only exemption in effect during this time was that granted to Clay and McCosh Knitting Mills by bylaw #189 on September 27, 1880. They received a nine-year tax exemption on their land, buildings, and water power because their factory had been damaged by fire on 24 July 1880. However, there were many tax reductions and exemptions granted to Paris manufacturers between 1887 and 1906:

TABLE 6.9

MUNICIPAL TAX REDUCTIONS AND EXEMPTIONS IN PARIS, 1887-1906

BYLAW NUMBER	YEAR	BUSINESS NAME	TERMS OF REDUCTIONS OR EXEMPTIONS
267	1887	Dickson Needle Works	Ten year tax exemption
272	1888	Mary L. Adams (Woolen Mill)	Ten year tax exemption
278	1888	Wincey Mill	$5,000 grant to locate in Paris
281	1888	Stewart & Hutton	Future expansions not taxed
331	1893	The Alabastine Co. and Paris Electroplating	Future expansions not taxed, except for PSSS taxes, which are still payable
368	1897	Penman Manufacturing Company (Limited)	Assessed value frozen at $125,000 for tax purposes at all their sites, except for PSSS taxes, which are still payable; the reduction lasts ten years.
404	1900	Wheeler Needle Works	Ten year tax exemption on future expansions
457	1903	Sanderson-Harold	Ten year tax exemption
458	1903	Paris Plow Company	Ten year tax exemption
503	1906	Penman Manufacturing Company (Limited)	Assessed value frozen at $125,000 for tax purposes at all their sites, except for PSSS taxes, which are still payable; the reduction lasts ten years. (In 1916, bylaw #623 renewed this reduction for another ten years.)

The practice of granting municipal tax exemptions or outright grants to manufacturers was allowed by provincial legislation. Between 1880 and 1900, the power to make such decisions resided at times solely with town councils, and at other times the assent of the ratepayers was also needed.[24] The justification for such preferential tax treatment seems to have involved the "trickle-down" theory. It was thought that if the manufacturers were spared expense, then the town would benefit. Paris bylaw #278, which received the necessary voter assent to grant a $5,000 bonus to the Wincey Mill, contains the following recital:

> Whereas . . . W. Frederick Wiley is desirous of establishing a Wincey Mill in the said Town of Paris, and it is desirable in the interests of the said Town that he said W. Frederick Wiley should be induced to do so . . .

This $5,000 figure was significant as the total cost of the factory to be built was estimated at only $14,000.[25] In 1888, the year of the passing of this bylaw, the Town of Paris' annual budget was only $35,361.[26] Penman's Manufacturing Company also benefitted from trickle-down ideology. In 1906, its proposal to install additional machinery in its mills was met by the approval of town council, which granted a tax reduction, "in consideration of the general advantages which the Town will derive therefrom."[27] This reduction, too, was significant. For ten years (and for another ten years when this tax reduction bylaw expired in 1916[28]), the assessed value of Penman's mills was frozen at $150,000 in respect of GTHS taxes. Penman's still had to pay PSSS taxes. By 1910, the value of Penman's mills had risen to $267,648,[29] and by 1916 it reached $284,648.[30] In 1917, the PSSS mill rate was only 7.5, while the GTHS rate was 26.5.[31] Penman's thus saved $3,568 in tax in 1917 (since it managed to avoid paying tax on $134,648 of assessed value at the rate of 26.5 mills). Penman's still had to pay $2,134 for PSSS tax, and $3,975 for GTHS tax, for a total tax payment of $6,109. This is only sixty-three percent of what it would have had to pay, but for the tax reduction bylaw. A total of $9,677 would otherwise have been paid.

Even at that, however, Penman's did pay a sizeable portion of the total tax received by the town. In 1916, Penman's taxable property of $150,000 represented eight per cent of the total taxable property in town ($1,814,338[32]). In 1904, Penman's taxable property of $125,000 was thirteen percent of the total in town, which was $1,123,572.[33] Then again, this may not have been too much to ask of a firm which, as stated earlier, "by the early twentieth century . . . employed 1,000 workers in a community whose total population numbered only 3,500."[34] For the thirty years between 1897 and 1926, much of Penman's property was not taxable, due to the three ten-year bylaws passed in its favour.

As the principal investor in the Paris Plow Company, John Penman was also interested in getting tax concessions for that company when it began operation in 1903. Penman owned sixty-one percent of the preferred shares ($46,300 of a total of $75,000), and seventeen percent of the common shares, most of the latter of which he held "in trust" for an unnamed beneficiary.[35] Bylaw #503 granted this company a complete exemption from all taxes for ten years, but even at that, the company was no longer in operation by 1916. (If it went bankrupt, then, as a preferred shareholder, John Penman would have received his $46,300 back from the company in priority to all of the common shareholders.)

Thus, in the thirty years after the passing of the waterworks bylaw in 1882, and even thereafter, some of the wealthiest individuals in town were excused from paying their share of tax into the town treasury. It was this treasury which financed much of the waterworks system, especially in the early years.

4. FINANCING THE WATERWORKS SYSTEM

a. Items Paid from General Town Revenues

The cost of almost all of the components of the waterworks system which were not located on privately owned property was ultimately paid by the Town of Paris. These components required frequent repairs and replacements as new technology became available, and these costs, too, were borne by the Town. The waterworks debt was the first of many infrastructural debts which collectively set the town on a course from which it would never again recover. Even the railway debts accumulated by the town during the 1850s railway-building scandals[36] were repaid, returning the town to a nearly debt-free position.[37] This tendency toward debt at the time of the railway boom, and again in connection with the construction of municipal infrastructure, was not specific to Paris. Rather, throughout Upper Canada, British investors and colonial governments conspired to create this debt:

> The colonial government took steps to ensure municipal borrowing of British capital at more favourable interest rates through the 1852 Consolidated

> Municipal Loan Fund Act. The provisions of the Act encouraged the municipalities to undertake public ownership and operation of various public utilities, including subsequently waterworks, gasworks, and tram cars. With the boom mentality of this period many municipalities invested heavily and unwisely. The extent of indebtedness was concealed from the general public because interest payments were financed from new borrowings rather than municipal taxes. Such financial practices obviously could not last long. In 1857 a financial stringency in Europe caused the flow of British capital to cease.[38]

The Municipal Loan Fund Act did influence policy in Paris, as Queens Ward Councillor Hugh Finlayson said of the proposed waterworks debt:

> We were justified in going into the expense as the town had received $30,000 from the Municipal Loan fund. This had been applied to building two excellent bridges, which the town would have had to be taxed for otherwise.[39]

The Paris waterworks debt began with the initial debenture of $30,000.[40] The debenture was to pay for the following items, according to an 1881 estimate, probably compiled by C.H. Roberts, which put the total cost at only $23,545[41]:

3 1/2 miles of iron piping	$11,459
38 anti-freezing hydrants	1,406
Lead pipe for joints	600
Elbows and sundry castings	800
Carting and laying pipe at 5 cents per foot	2,640
Excavating pipebeds (5' by 2') and refilling at 15 cents per square yard of earth	2,640
"Rough estimate of reservoir, dam, wheel, pump, piping, &c. at spring"	4,000

("The cost of the last item above is of course mere guess-work. The rest is, we believe, about correct.")

In 1884, having exceeded the $30,000 budget, a further sum of $8,000 was borrowed "to complete" the waterworks system.[42] In 1889, $5,000 was borrowed for the "extension and improvement" of the system.[43] Of this sum, $700 was spent on a boiler, $1,300 on a pumping engine, and $3,000 on pipes and other items. In 1899, $2,000[44] of an $11,000 debenture was spent on a new watermain to cross the Grand River along Dundas Street to service the Flats.[45]

It was estimated in 1897 that the total cost of the system was $55,118,[46] even though the total of the above debentures is only $45,000.[47] By May 1902, the cost was estimated at $57,195.[48]

Also in May 1902, Municipal World magazine described the Paris pumping station as a "relic," and predicted that "it can scarcely be supposed that so ambitious a town as Paris can remain content with this feature of its waterworks system."[49] In June 1903, the hydro-electric powered period of waterworks began in Paris. Bylaw #460 raised $23,000, of which $15,000 was used for improvements to the waterworks system. An electric pump was purchased, together with the poles and wires needed to connect it with the local electric light station. Since the new pump transported more water than the old one, it was also necessary at this time to install ten-inch pipes in place of the six-inch ones between the pumping station and the reservoir. Extension pipes were also laid in parts of North and South Wards.

By 1908, the Town of Paris annual financial statement listed the value of the waterworks system at $79,958.[50] This increased in ensuing years as follows:

TABLE 6.10

VALUE OF THE PARIS WATERWORKS SYSTEM, 1910-1930

Year	Estimated Value
1910	$ 84,967
1911	88,145
1916	95,622
1923	96,664
1924	107,524
1930	108,830

SOURCE: Abstract of Receipts and Expenditures, Town of Paris, for each of the listed years.

Incidentally, hydro-electric development was also a major expense at this time. Paris' hydro system's assets were worth only $17,000 in 1901, but rose to $55,324 in 1910, $89,000 in 1920, and $153,544 in 1930.[52]

The provincial statute titled, "The Municipal Waterworks Act, 1882"[53] required that municipalities bear the expense of the majority of the components of a public waterworks system. Municipalities were given the power to construct and maintain "all such reservoirs, water-works, and machinery requisite for the undertaking,"[54] and were also given the right of ownership over "all such water-works, pipes, erections, and machinery requisite for the said undertaking."[55] The municipality was to build and repair, at its own expense, "all such service pipes which may be required . . . up to the outer line of the street."[56] Landowners who subscribed for water service were only required to pay for and repair the portion of a service pipe which was on their property,[57] or which traversed vacant land in order to reach their property.[58]

The cost of street mains during the initial construction of a waterworks system was a municipal expense, but this was not the case where waterworks extensions occurred. The provincial statute allowed councils, if they wished, to demand of residents of newly-serviced streets a special tax which would repay the debentures which funded the extension.[59] Paris does not seem to have utilized the principle of "user pay," even to the extent it was permitted by provincial legislation. The province's "local improvement" payment system, whereby the cost of local infrastructure was allocated to those immediately benefitted by it, was not adopted by the town until at least 1918.[60] The town paid for the taps which water subscribers used, while some towns in Ontario did not bear this expense.[61] The Town of Paris bylaw #297, which provided for the management of the waterworks system, repeated many of the provisions of the provincial Municipal Waterworks Act, including the provisions pertaining to the subscribers' responsibility for the service pipes on their property.[62]

b. Items Paid by the Users of Waterworks

Subscribers for water service in Paris, in most instances, paid for the service pipes from the street to their faucet, as well as an annual flat rate fee for the water itself. Different fee provisions applied to domestic, industrial and commercial users. Within the category of industrial users, arbitrary fees were assessed. In all categories, little attempt was made to use pricing as a means of controlling the amount of water consumed, though a few large industrial users seemed to face the weakest pricing restrictions on their usage of water.

Domestic water subscribers paid an annual fee which was scaled to the number of rooms in the dwelling, and to the number of "inmates" residing therein. The minimum annual domestic fee was five dollars, the maximum was nineteen dollars, and most families would have paid ten dollars or less. This schedule, created in 1889, was as follows:

TABLE 6.11

SCHEDULE OF ANNUAL WATER RATES FOR DWELLINGS, PARIS, ONTARIO, 1889

NUMBER OF ROOMS	NUMBER OF INMATES						
	5	7	9	11	13	15	17
5	$5	$6	$7	$8	$9	$10	$11
6	6	7	8	9	10	11	12
8	7	8	9	10	11	12	13
10	8	9	10	11	12	13	14
12	9	10	11	12	13	14	15
14	10	11	12	13	14	15	16
16	11	12	13	14	15	16	17
18	12	13	14	15	16	17	18
20	13	14	15	16	17	18	19

SOURCE: Town of Paris Bylaw #297, Schedule, 16 December 1889.

A subscriber who wished to have lawn watering rights in addition to her normal service was required to pay at least an additional $6.00, depending on the size of the garden, while a urinal or a water closet would add another $3.00 to the annual fee.[63]

Commercial subscribers also used a flat rate system of payment.[64] Most types of stores and offices were listed in the bylaw with a set fee beside each. For example, butchers paid $6.00 per year, photographers $10.00, law, medical and dental offices $5 00, and most other stores $5.00, except liquor stores which paid $10.00. For some commercial users, the fee was increased if, for example, the store had more than thirty feet of frontage, or if a barber had more than one chair in service.

Not all industrial subscribers were subject to a fixed fee system. Although the 1889 Paris waterworks bylaw states that metered rates can be made by "special arrangement,"[65] no meters were in fact used at that time. Instead, industries received water service in exchange for a fee determined by the waterworks committee and, later, by the waterworks commission. For example, in 1894, the waterworks committee decided:

> That the contract for supply of water now existing between the Grand Trunk Railway and the Corporation of Paris be renewed for a further period of 10 years upon the same terms and conditions and that the clerk immediately notify the G.T. Authorities to this effect."[66]

There was no consistency in the treatment accorded to manufacturers by the municipal authorities. For example, in 1894, the committee decided not to grant a small manufacturer (Gillies Brothers) free water, as it sought to establish a new policy:

> In future no further applications for free water will be granted, as in time the doing so would necessarily impair our source of revenue in the Waterworks Department and lessen our supply of water without adequate remuneration.[67]

Yet, in 1898, council granted Penman's free water for ten years.[68] Provincial legislation allowed for this discriminatory behaviour by municipal corporations:

> The said corporation shall have power and authority to supply, upon special terms, any corporation, or persons with water . . . and they may also from time to time make and carry out any agreement which they may deem expedient for the supply of water to any railway company or manufactory . . . [69]

Paris' waterworks bylaw repeated this provision in an abridged form.[70] The domestic and commercial rates described in the schedule of the 1889 bylaw appear to have remained in effect as late as 1913.[71] However, in 1910, some users, most of whom were probably industrial, paid on a different basis. Those who received metered service were required to pay in accordance with the following resolution of the Water and Light Commission:

TABLE 6.12

WATER RATES FOR METERED USERS IN PARIS, ONTARIO IN 1910

VOLUME OF WATER (in cubic feet)	RATE OF PAYMENT (in cents per 100 cubic feet)
1,000 or less	12
1,000 - 3,000	10
3,000 - 5,000	9
5,000 - 15,000	7.5
15,000 - 20,000	6
20,000 - 30,000	5.5
30,000 - 40,000	5
over 40,000	4.5

SOURCE: Minutes of the Paris Water and Light Commission, 9 February 1910.

This fee system made it less onerous to be a large consumer of water, and in some cases made it advantageous to waste water. For example, under this schedule, a user of 4,900 cubic feet of water paid more for it than a user of 5,100 cubic feet paid. (The former paid 49 X 9 cents, which equals $4.41, while the latter paid 51 X 7.5, which equals $3.83.)

As in the pre-meter years, special agreements were made with selected customers In 1915, the Paris Hydro Electric and Water Commission agreed to sell to the Grand Trunk Railway 330,000 gallons of water per day for $2,300 per year.[72] The following calculation converts this arrangement to terms which can be compared with those granted to other metered users:

330,000 gallons per day, costing $2,300 per 365 days,
=330,000 gallons per day, costing $6.30 per day.
Therefore, 330,000 gallons of water sold for $6.30.

Since there are 6.22 gallons per cubic feet of water,
Therefore, 53,155 cubic feet of water sold for $6.30.
Therefore, 100 cubic feet of water sold for 1.187 cents.

Thus, while other metered users of water in Paris paid between 12 and 4.5 cents for 100 cubic feet of water, the railway paid less than 1.2 cents. Further, the 300,000 gallons which the railway consumed placed a large strain on the water resources of the town. Even though the population almost doubled between 1915 and 1991, the railway's 1915 consumption equalled forty-nine percent of the total domestic consumption of water in Paris in 1991. (The average domestic consumption per day in Paris in 1991 was 2,739 cubic metres,[73] while the railway in 1915 consumed the equivalent of 1,342 cubic metres per day. This latter calculation is derived by dividing 53,055 cubic feet by 3.3 X 3.3 X 3.3, which equals 1,342 cubic metres.)

It is not surprising, given the large volume of water which was being consumed by the railway, that there was a water shortage. In December 1918, the commission rejected Walker Press' request for free water, stating that, "owing to the shortage of water supply, the Commission can only supply water for manufacturing purposes to the Walker Press at the regular meter rates."[74]

c. Comparing Waterworks Revenues and Expenses

i. 1882-1901

The claim by waterworks supporters in 1882 that the proposed system would pay for itself was proven false by later developments. At various times, the appearance of self-

TABLE 6.13

REVENUES AND EXPENSES OF THE PARIS WATERWORKS SYSTEM, 1882-1901

	REVENUE		EXPENDITURES	
YEAR	RATES	HYDRANTS AND STREET SPRINKLING	MAINTENANCE	CONSTRUCTION AND SERVICES
1901	$4,498.35	$1,250	$3,451.03	$368.24
1900	4,371.38	1,250	2,993.77	824.48
1899	3,965.00	1,250	3,826.24	2,367.75
1898	4,776.94	1,250	1,832.21	150.06
1897	4,493.45	1,250	2,216.36	375.99
1896	4,327.03	1,250	1,761.13	266.91
1895	4,288.48	1,250	2,106.83	1,048.88
1894	3,920.14	1,250	1,903.44	455.11
1893	3,702.88	1,250	1,754.28	1,004.76
1892	3,642.49	1,250	1,526.06	526.46
1891	3,364.78	1,250	1,625.93	2,892.21
1890	3,253.85	1,250	1,910.95	3,032.59
1889	2,946.05	1,250	1,368.91	1,243,59
1888	2,689.76	1,250	1,289.91	1,232.57
1887	2,573.25	1,250	1,966.55	1,396.10
1886	2,111.88	1,250	1,216,34	1,332.90
1885	572.60	1,250	1,314,45	3,050.56
1884	74.00	1,250	930.18	4,457.38
1883	----	1,250	184.39	22,050.80
1882	----	----	----	9,117.71
TOTALS	$60,073.19	$23,750	$35,178.96	$35,195.05

SOURCE: W.A. McLean, "Waterworks, Electric Lighting, Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902): 11.

financing arose from creative accounting techniques, oversights, and willful blindness. In fact, the system resulted in a huge financial loss. A sizeable portion of what was classified as revenue was in fact simply a re-routing of general tax revenues which everyone, including non-waterworks subscribers, had paid to the town. Among the expenses, the cost of the interest on money borrowed by debenture was never included.

Certified engineer W.A. McLean wrote an article on the Paris waterworks system in a 1902 supplement to Municipal World magazine.[75] Using financial statements provided to him by the Town of Paris, McLean compiled the summary of the revenues and expenses of the waterworks system from 1882 to 1901 which is in Table 6.13. McLean explained which items were included in the revenue columns:

> The revenue is made up of actual payments of water rates, and a nominal charge, levied against the general funds of the town, for fire protection and other public uses. The charge for fire protection is usually levied as a hydrant rental.[76]

Thus, the $23,750 included as revenue from the category of "Hydrant and Street Sprinkling" was not a sum which was paid by water subscribers. Instead, money which was already in the town coffers was routed through to the waterworks department so as to inflate the revenue side of the ledger. This money was comprised simply of property tax revenues. No doubt it was in part due to this source of funds that, by 1902, over $57,000 could be spent on the construction of waterworks even though the authorized debenture issues totalled only $45,000.

There is also a striking flaw on the expenditure side of the ledger. McLean explained that included in these columns were "maintenance outlay for fuel, labor, repairs and supplies, together with amounts chargeable to construction account."[77] The capital obtained from debentures was included in the "Construction and Services" column. In 1882 and 1883, a little over $30,000 (the value of the first debenture) is listed as being spent in this way. Similarly, the 1884 debenture worth $8,000 seems to have financed the construction which took place in 1884 and 1885, which totalled about $7,500. However, nowhere in McLean's calculations does

he include the sums paid as interest on the debentures. These sums were significant in two respects. First, in magnitude, they surpassed the sums paid on account of the capital of the debentures. The $30,000 waterworks debt was repayable over thirty years at six percent interest, in equal annual payments of $2,179.[78] Obviously, $1,000 of this would be attributed to capital, leaving $1,179 which the town paid on account of interest on the debenture. Second, this interest, together with any other shortfalls between revenues and expenses, was paid not by waterworks subscribers, but, again, by taxpayers at large.

Thanks to these two large errors in his analysis, McLean was able to conclude:

> A comparison of these totals is very favourable indeed. The revenue from rates alone exceeds the maintenance outlay by $24,894.38. The total expenditure for all purposes since construction was commenced, exceeds the total revenue by only $8,550.88, an amount which will be wiped out in less than five years on the basis of the results of 1901.[79]

However, the correct scenario was as follows. The revenues during the twenty years was simply $60,073.19, which is the total of the water rates received. The hydrant rental cannot be included for the reasons outlined above. On the expenditure side, the sums of $35,176.96 and $57,195.05 must be augmented by twenty years of interest payments at $1,179 per year. Thus, the total expenditure for the twenty years was $115,952.01. Subtracting the revenues during this period of $60,073.19, the actual balance was a deficit of $55,878.82.

An appreciation of the extent of the interest which would accrue on the $30,000 debenture was evident in John Kay during the waterworks debate. At the public meeting of 12 May 1882, Robert Montgomery, before proceeding to refute him, referred to John Kay's statement that, "taking principle and interest together, we should pay $60,000 for waterworks instead of $30,000."[80]

ii. Social Effects of Reduced Fire Insurance Premium Rates

It is interesting to note that the sum of $1,250 annually should have been chosen as the cost of the hydrant rental payable by the town to the waterworks department. One recalls that during the waterworks debate in 1882, the Paris Transcript estimated that $1,300 annually

would be saved on fire insurance premiums by Parisians if the town built a waterworks system.[81] It is unclear whether such insurance reductions ever did result, due to lack of evidence. However, assuming they did, the sums might seem to offset each other. In fact, though, the two forms of payment were raised from much different social classes. The hydrant fee was paid out of general town revenues, to which all taxpayers contributed at the same rate of taxation. Insurance premiums, though, were not necessarily paid by all ratepayers. Moreover, insurance was not sold at the same rate to all purchasers. Distinctions were made between residential and mercantile land uses. The Charles E. Goad firm published a reference book which was to be used in conjunction with its 1882 insurance maps of Paris. This text lists the following rates per $100 of insurable value of residential property:

First Class - Brick or Stone Isolated Dwelling, Fire-proof Roof	$0.50
Second Class - Brick or Stone Isolated Dwelling, Wooden Roof	.60
Third Class - Plastered or Veneered Isolated Dwelling, Wooden Roof	.70
Fourth Class - Wooden Isolated Dwelling	.75[82]

The following were the rates payable for "mercantile risks:- Non-hazardous occupations:"

First Class - Brick Isolated Store, Fire-proof Roof	$0.75
Second Class - Brick Isolated Store, Wooden Roof	1.00
Third Class - Plastered or Veneered Isolated Store, Wooden Roof	1.25
Fourth Class - Wooden Isolated Store	1.50[83]

The assumption that "hazardous occupations" may have been subject to a higher rate than these is supported by the section of the text which deals with specific properties. C.H. Roberts' drug store, for example, was rated at $2.25 per $100 of value.[84] Turnbull and Thomson's planing mill was rated at $5.00,[85] while Crane and Baird's mill was rated at $3.00.[86] Perhaps the siting of the property in a crowded (or non-"isolated") location also resulted in an increased rate. In any event, few dwellings are even listed in the text, and most of them are rated at $1.50 or less. Most of the merchants and manufacturers are listed, and they are usually rated at $1.50 or more. Penman Manufacturing Company had $16,900 worth of property listed at $1.50, while $8,600 worth was listed at the $3.00 rate.[87]

Thus, the replacement of $1,300 worth of insurance payments with $1,250 of municipal funds did not affect the social classes equally. This argument was raised, in part, during the waterworks debate. At the public meeting of 12 May 1882, Robert Montgomery, who operated a dry goods store on Grand River Street North, refuted an accusation from Thomas Evans:

> Mr. Evans has accused the business men of the town of selfishness. He said they paid 3 per cent for insurance, whereas, as a matter of fact, the majority of the merchants on River Street pay but 1 per cent.[88]

This argument concerning the insurance rates paid by merchants could not be resolved by citizens simply by consulting the Goad rate book, as the information contained in it was confidential. The Goad firm sold their text to insurance companies which wished to have more detailed information about the properties they were insuring. Buyers of the Goad manual were bound by the following contractual term which was printed at the front of the text:

AGREEMENT REGARDING USE OF REFERENCE BOOKS SIGNED BY SUBSCRIBING COMPANIES

> The ..... Insurance Company, hereby promise and agree that they will not impart information contained in Reference Books, obtained or to be obtained by them of Mr. Chas. E. Goad, to any officer or agent of any Company that has not subscribed for copies of these Reference Books, and promise that they will use these books for their own business solely, and that they will not allow them to be used for business of other Companies, or permit any information to be obtained from them for such other business.

In fact, the merchants on Grand River Street North were rated at about $2.00. The mean of the rates paid by forty-five merchants on that street was $1.98. Mr. Evans himself paid a rate of $1.50 at his paint shop, while Mr. Montgomery paid a rate of $1.25 at his dry goods shop.

Those who received water service in Paris had the cost of their service subsidized by those who received no service, since all landowners paid higher taxes after 1881. Those mills which received tax reductions or exemptions were particularly well subsidized. Most of the cost of the waterworks systems was paid by public funds, while the principle of "user pay" implicit in

the waterworks committee's "seven percent" rule served to legitimize their decisions concerning applications for new waterworks services. The cost of the project greatly exceeded $30,000, just as waterworks opponents said it would. The net effect of the replacement of high insurance rates with high tax rates was a savings by those who had much commercial and industrial property to insure.

NOTES

1. The Assessment Act, Revised Statutes of Ontario, 1877, chapter 180, section 2(7).

2. Ibid., s. 2(8).

3. Ibid., s. 12(4), column 15. The Town of Paris tax assessments for 1881 list taxable income, however, in column 14.

4. Ibid., s. 28.

5. Ibid., s. 6(22).

6. Ibid., s. 6(21).

7. Ibid., s. 6(15).

8. Ibid., s. 5.

9. Town of Paris Property Tax Assessments, 1881, Archives of Ontario, reference number F1551.

10. Ibid.

11. The Consolidated Municipal Act, 1883, Statutes of Ontario, 46 Vic., c. 18, s. 360.

12. Town of Paris Bylaw #201, 1881.

13. Town of Paris Property Tax Assessments, 1901.

14. Town of Paris Bylaw #201, 1881.

15. Town of Paris Bylaw #423, 1901.

16. Town of Paris Bylaw #201, 1881.

17. Town of Paris Bylaw #423, 1901.

18. This sum is estimated by multiplying the mill rate for that year by the land value, as given in Bylaw #201, 1881.

19. Abstract of Receipts and Expenditures, Town of Paris, 1901.

20. Town of Paris Bylaw #208, 26 June 1882.

21. Abstract of Receipts and Expenditures, Town of Paris, 1901.

22. Ibid.

23. Town of Paris Bylaw #201, 1881.

24. See, for example, The Municipal Assessment and Exemption Act, 1880, Statutes of Ontario, 43 Vic., c. 27, s. 16; The Municipal Amendment Act, 1882, Statutes of Ontario, 45 Vic., c. 23, s. 17; The Consolidated Municipal Act, 1883, Statutes of Ontario, 46 Vic., c. 18, s. 368; The Municipal Amendment Act, 1884, Statutes of Ontario, 47 Vic., c. 32, s. 8; The Municipal Amendment Act, 1900, Statutes of Ontario, 63 Vic., c. 33, s. 8.

25. Town of Paris Bylaw #278, 1888.

26. Town of Paris Bylaw #277, 1888.

27. Town of Paris Bylaw #503, 1906.

28. Town of Paris Bylaw #618, 1916.

29. Town of Paris Property Tax Assessments, 1910. Penman's mill on West River Street was assessed at $72,000, while the firm's mills on the Flats were assessed at $195,648.

30. Town of Paris Property Tax Assessments, 1916.

31. Town of Paris Bylaw #632, 1917.

32. Town of Paris Property Tax Assessments, 1916.

33. Town of Paris Property Tax Assessments, 1904.

34. Joy Parr, The Gender of Breadwinners (Toronto: University of Toronto Press, 1990), 15.

35. Penman Family Papers, Archives of Ontario, reference number MU2312, box 1

36. D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 224. See also the quote of Thomas Evans in, "Public Meeting: Waterworks Carry the Day," Brant Review, 18 May 1882, also found on page 71 of C.H. Roberts' scrapbook.

37. Town of Paris Bylaw #208, 26 June 1882. This bylaw states that the town debt was only $3,697. The annual publication, Abstract of Receipts and Expenditures, Town of Paris, indicates that the debenture debt rose to a peak of $344,129 in 1933, but was reduced by 1950 to only $77,827. However, in 1951 the debt soared to $314,331 as a major school construction project began. In 1952, more borrowing for the school pushed to debt to $746,045. By 1961, the town debt totalled $1,078,586, and in 1971, the construction of the first comprehensive system of sewerage pushed the debt up to $2,170,755. The mill rate in 1971 ranged between 110 and 130, depending on the nature of the taxpayer.

38. Municipal Administration Program (Ontario Association of Municipal Clerks and Treasurers, 1990), Unit 1, Lesson 1.

39. Brant Review, 6 July 1882; C.H. Roberts' scrapbook, 309.

40. Town of Paris Bylaw #208, 26 June 1882.

41. Paris Transcript, 1881; C.H. Roberts' scrapbook, 1.

42. Town of Paris Bylaw #229, 18 August 1884.

43. Town of Paris Bylaw #298, 16 December 1889.

44. W.A. McLean, "Waterworks, Electric Light, Sewerage, etc., Town of Paris," supplement to Municipal World 12, no. 5 (May 1902): 11.

45. Town of Paris Bylaw #393, 11 September 1899.

46. M.N. Baker, ed., The Manual of American Waterworks, fourth issue (New York: The Engineering News Publishing Co., 1897), 604.

47. McLean, "Waterworks, Electric Light, Sewerage, etc.," 11.

48. Ibid.

49. Ibid., 9.

50. Abstract of Receipts and Expenditures, Town of Paris, 1908.

51. Ibid., 1901, 1910, 1920, 1930.

52. Ibid., 1911, 1920, 1925, 1930.

53. The Municipal Waterworks Act, 1882, Statutes of Ontario, 45 Vic., chapter 25.

54. Ibid., s. 10.

55. Ibid., s. 14.

56. Ibid., s. 16(1).

57. Ibid., s. 16(3).

58. Ibid., s. 16(2).

59. Ibid., s. 46(1).

60. A flyer found in the Paris Municipal Office indicates that in January 1918, a vote was held among Paris ratepayers on the issue of opting into the Province of Ontario's local improvement legislation.

61. M.N. Baker, Manual of American Waterworks.

62. Town of Paris Bylaw #297, sections 8, 9, and 18, 16 December 1889.

63. Ibid., Schedule.

64. Ibid.

65. Ibid.

66. Minutes of the Town of Paris Waterworks Committee, 7 August 1894.

67. Minutes of the Town of Paris Council, 24 September 1894.

68. Town of Paris Bylaw #378, 10 October 1898.

69. The Municipal Waterworks Act, 1882, s. 28.

70. Town of Paris Bylaw #297, s. 3, 16 December 1889.

71. An application for water service by International Harvestor in 1913 has, printed on the back of it, a schedule of rates which is identical to the schedule of rates in bylaw #297. This firm was moving into lands formerly occupied by the Paris Plow Company. This application is kept in the Paris Municipal Office.

72. Minutes of the Town of Paris Hydro-Electric and Water Commission, 5 May 1915.

73. R.V. Anderson Associates Limited, "Water Distribution System Needs Study Report," draft copy, prepared for the Paris Public Utilities Commission, November, 1991.

74. Minutes of the Town of Paris Hydro-Electric and Water Commission, 13 December 1915.

75. McLean, "Waterworks, Electric Light, Sewerage, etc."

76. Ibid.

77. Ibid.

78. Town of Paris Bylaw #208, 26 June 1882.

79. McLean, "Waterworks, Electric Light, Sewerage, etc."

80. Paris Transcript, 19 May 1882; reprinted in a pro-waterworks flyer on C.H. Roberts' scrapbook, 163.

81. Paris Transcript, April or May 1882; C.H. Roberts' scrapbook, 55.

82. No. 14 Reference Book to Accompany Insurance Plan of Paris, Ontario, With Ratings, July 1881 (Montreal: Chas. E. Goad, C.E.).

83. Ibid.

84. Ibid., Block C, #15 Grand River Street.

85. Ibid., Block F, #4 Elm Street.

86. Ibid., Block D, #27, 28 and 29 Grand River Street North.

87. Ibid., Block G, West River Street.

88. Paris Transcript, 19 May 1882; reprinted in a pro-waterworks flyer on C.H. Roberts' scrapbook, page 163.

CHAPTER 7

DISCUSSION

Two major conclusions can be drawn from this study of the Paris waterworks system. First, there was a clear correlation between the spatial pattern of waterworks development on the one hand, and the functional zonation and social geography of Paris on the other. The benefits of the system were distributed unequally both socially and spatially. There was also inequality in the distribution of control over the system, due to property-based voting laws, as well as in the allocation of its cost. This conclusion is consistent with the academic literature cited in Chapter 2 concerning American and major Canadian cities of the nineteenth century. This conclusion is also supported and informed by the theory of Marxism, which accounts for the inequality by anticipating that emphasis will be put on the needs in the realm of production, and the needs of the elite in their living space.

Second, it can be concluded that many attempts were made to cloak the unfairness in the distribution of waterworks costs, benefits, and management power with the justice suggested by specious arguments, rhetoric, and outright propaganda. The primary fallacy perpetuated by the elite was the self-serving "trickle-down" theory which paradoxically and erroneously equated the interests of the wealthy with the interests of the poor in Paris. This was just one of many ideological tricks. Others included local boosterism, the need for "progress," and the infallibility of "expert" opinion. The public interchange of ideas and information was distorted by the majority of the local newspapers, politicians and their hired experts in an attempt to protect these ideologies from inconsistent facts. The decisions made by municipal authorities almost invariably reflected the interests of the wealthy, thus supporting

the critical theorists' inference that government plays a merely legitimizing role. The ideological evidence in Paris also supports Marx's claim that "the ideas of the ruling class are in every epoch the ruling ideas."[1]

In Paris, the benefits of the waterworks system trickled up. Although it may be true that benefits which are deliberately handed to the upper classes will never trickle down to the lower classes to an appreciable extent, that is not being contended here. Instead, it is asserted that the economic conditions within the lower classes in Paris were not improved despite claims during the waterworks debate in 1882 that the installation of the waterworks system would have that effect. From the work of other researchers, it is clear that in Paris wages remained low, and that there were strict limitations on the types of persons who could find work locally.

D.A. Smith writes that "wages in Paris were very low before 1900 and, indeed, for years afterwards."[2] Joy Parr writes that "Penman's philanthropy was acknowledged as compensation for the low wages paid in the mill."[3] Wages were low not by accident, but by design. Smith writes:

> Three charges were levelled against Penman's that produced some hostility, but which, though they may be based on facts, are difficult to prove. For many years the company was charged with having made an arrangement with other local mills to the effect that if any of its employees applied for work,they would be sent back to their previous job. This, it was alleged, was to keep wages low. The charge may have been true before 1914, but was doubtful after that.
>
> It was also alleged that to maintain a low level of wages and to keep its work-force, Penman's strongly opposed the establishment of other industries in Paris . . .
>
> Finally, Penman's Ltd. was accused of urging some of its executives to become members of the school-board primarily to keep salaries and taxes down.[4]

A Penman's executive sitting on the school board is reported to have said that "we can't possibly give the teachers a raise, especially the women,"[5] since Penman's female employees would also then want raises. The concern with female labour was extreme at Penman's. Parr states:

> Through the 1880s and 1890s Penman's advertisements for help appeared in small-town newspapers across Canada, and he increasingly began to rely upon immigrants as hands. Significantly, between 1881 and 1891 the proportion of foreign born among the female factory operatives in Paris rose from 14 to 26 per cent. The first English hosiery workers arrived in the 1870s, soon after the Penman's partnership began factory production. Then as Penman's grew after a major financial reorganization in 1906, the labour shortage in Paris became acute. To overcome this problem, between 1907 and 1928 the firm assisted 700 British hosiery workers, principally women from the east midlands, to emigrate to the town."[6]

At this time, there was a strong incentive to hire females in Ontario. Smith writes that in 1881:

> Many women were employed at a very low wage. For example, in cigar factories, men were paid an average of $9.45 a week, but women ony $3.25. Naturally, when possible, the employers hired women.
>
> Also, hundreds of young children were employed. In cigar factories (like the one in Paris), their average weekly wage was $3.67 for boys and $1.94 for girls. When possible, the employers preferred children.[7]

In 1906, a request from Penman's prompted town council to resolve "that the council and citizens will do all in their power to facilitate the bringing of girls to Paris, the scarcity of which is causing them serious trouble and anxiety."[8] Council then instructed the town clerk to place the following advertisement in the Toronto Globe and Mail newspaper each Saturday for one month:

> One hundred families can find employment in the Town of Paris, the men in the various buildings and other operations etc., and the women and girls in the knitting mills. Female labour is particularly in demand, address the town clerk.[9]

It should be recalled that in Chapter 5.3, reference was made to an editorial in the Paris Star-Transcript in 1902 which stated that:

> Unfortunately, Paris has not been able to hold its young men. We venture to say that within the last 25 years, fully 75 per cent of the young men bred here have left town in quest of wider fields.[10]

Thus, a pattern emerges whereby, even since the 1870s, most locally-born men left Paris, and hundreds of foreign-born females entered it. The cause of both movements was the availability of employment opportunities. This pattern makes the propaganda concerning local boosterism and civic pride in Paris ring hollow. There was no intrinsic connection between

many Parisians and Paris. Rather, Paris was a place where a few individuals established means of production which greatly influenced the flow of persons in and out of the town.

The employment opportunities in Paris were not the necessary result of the inanimate factors which are typically examined in location theory and financial flows. Instead, it would seem that the bulk of Parisian males left in quest of wider fields because the fields of employment were arbitrarily narrowed by the deliberate, concerted actions of the local elite. John Penman in particular played a prominent role. Between 1881 (approximately the year when Penman became the dominant employer in town) and 1920, more factories closed than opened.[11] Of those that opened, many were owned or controlled by Penman himself. For example, Penman owned most of the preferred shares of the Paris Plow Company Limited, and both he and the general manager of his knitting mills, Richard Thomson, were on the plow works' board of directors.[12] In 1887, Penman bought the knitting mill of Adams and Hackland which was located on the Willow Street race.[13] Adams was a former partner of Penman's who had started, "the manufacture of hosiery and underwear . . . in opposition to the original concern."[14] Penman also purchased Watson Manufacturing of St. Catharines and moved it to Paris, along the Willow Street race.[15] In all, between 1887 and 1903, Penman bought out seven textile mills, several of which were moved to Paris from other towns.[16] In fact, according to Joy Parr, during the 1890s:

> Penman gained control of the best mill sites and water rights in town and through additional purchases consolidated his title to the limited level land along the banks of both the Nith and Grand rivers.[17]

In 1889, the Wincey textile mill which opened on Mechanic Street at the foot of Broadway Street did not compete with Penman's in the product market. Penman's produced knitted goods, while Wincey made woven ones.[18] Also, D.A. Smith stated that Penman's produced finished goods, while Wincey produced primarily fabrics and materials.[19]

Some of the control of Paris' labour market may also have been exercised by the Paris Board of Trade, which took "cognizance of all matters affecting the town's industrial welfare."[20]

In any event, the construction of the waterworks system did not induce men of capital to live in and invest in Paris. But, in time, according to Parr, Penman's managed to thrive:

> The dominant firm in Paris, Penman's Limited, was not only the largest employer in town. It was the largest knit-goods manufacturer in the country, the leader in an oligopolistic industry with impeccable ties through its Montreal shareholders to successive federal governments.[21]

The firm, however, for years paid below-average wages and, in 1884 at least, employed children as young as nine years old.[22] While the town sunk deeper into debt, Penman's and the other industries in town found themselves surrounded by beneficial infrastructural improvements. Perhaps much of the concern with satisfying the interests of the railways, in particular their need for a cheap, plentiful source of water, can be explained in relation to Penman's as well. It is likely that the raw materials (cotton and wool) processed in Penman's mills were brought to town on the trains, and that the finished products left that way also.

Chapter 5 of this thesis shows that the waterworks system provided little in the way of direct benefits to the lower classes in Paris. The work of Smith and of Parr, quoted above, indicates that the indirect benefits which were debated in 1882 also did not trickle down to the lower classes. Instead, many of the theories described in Chapter 2 of this thesis find some support in the case of Paris. For example, Harvey's assertion that local business coalitions may seek to inhibit growth in order to reduce competition would appear to have relevance in Paris. So, too, would Cox and Mair's assertion that local boosterism was a major preoccupation with local newspapers and the local business coalition in general. Attempts were made to promote the idea that Paris was inherently superior to other places, whether as the prettiest town in Canada, or as best endowed for waterworks development, or in other respects. This boosterism was always linked somehow to the need to improve the local business climate for the good of the town, which was said to be in a struggle for survival against other towns.

Bad faith is here being alleged in many respects on the part of the wealthy in Paris. If Smith and Parr are to be believed, then it would appear that there was never any intention by

the rich to permit the improved business climate and the infrastructural improvements to attract new investors. Instead, the resident merchants and industrialists sought only to make their enterprises more profitable. There was never an intention by the wealthy to permit realistic estimates of the proposed waterworks system's cost and capabilities to be generally known. The claims made by laymen opponents of waterworks were more accurate than the claims made by "professional" waterworks supporters such as the engineers retained by council. There was clearly no intention by the wealthy to equally distribute the costs and benefits of the waterworks system. Statements to the effect that waterworks service would be available to all residents and that each would pay according to the amount used were obviously false given the proposed water main plan and the proposed method of debenture financing. The wealthy counted on the ignorance of the masses, and on a strategy of discrediting any opponent of waterworks who was intelligent enough to penetrate their smoke screen.

The development of the Paris waterworks system was not democratic. Funk and Wagnalls Dictionary defines "democracy" as "the spirit or practice of political, legal, or social equality," and defines "democractic" as "existing or provided for the benefit or enjoyment of all."[23] The provincial legislation controlling municipal council membership and municipal voting eligibility were in violation of the practice of legal and political equality. The location of the water mains and the varying thickness of the pipes show that water was not provided for the benefit of all. There appears to have been no belief that democracy would involve the public presentation of honest argument before a fully-informed citizenry. Instead, the vote itself was a foregone conclusion. All of the propaganda and rhetoric was apparently directed at those who were ineligible for bylaw votes, but to whom the municipal councillors and local elite wished to legitimate their self-serving decisions.

The Paris waterworks system was, during the early years, a technical failure, and was for many years a financial failure which put the town deeply into debt. However, the system provided the elite of Paris with superior water service, and with superior fire protection,and

reduced fire insurance rates. It appears that it was not until 1935 that the waterworks system achieved some degree of efficiency and equity. In his letter of resignation as chairman of the Paris Public Utilities Commission, Richard Thomson (the former Penman's general manager), wrote:

> The new waterworks system after being subjected to much adverse criticism by many who had no means of knowing existing conditions nor being informed of the extreme necessity of finding a solution to the problem, was carried through and all of the citizens can congratulate themselves on having a complete waterworks system providing good palatable water, with increased fire protection throughout the whole town.[24]

Further research should be done to determine whether the experience in Paris was common elsewhere. Ideally, such research should involve analyses which are as detailed as the analysis in this thesis. In particular, it is imperative that the major waterworks proponents and opponents be identified, and that their arguments be evaluated in light of later political and technical developments. Research should also examine the attempts to legitimate the decisions taken, and the role which local newspapers played in this regard. As waterworks was just one of several major infrastructural projects which were commonly built after the 1880s, it would be informative to compare and contrast waterworks studies with studies of systems of hydro-electricity, sewers, telephones, and paved roads. Perhaps, as in Paris, the common finding will be that an upper-class need was satisfied in large part through the resources of the lower class.

The Marxist approach is particularly suited to studies which explore the question of waterworks implementation from a political perspective, with emphasis on the differing effects on social classes. A neo-classical approach may be used, for example, to substantiate a causal connection between waterworks development and the growth of the municipality or its industries. In such a case, the adoption of new technology may be used to explain shifts in the metropolitan hierarchy, or shifts in the competitive advantage of particular manufacturers. While both the Marxist and the neo-classicist may study waterworks, they ask different questions, and not surprisingly, produce different results.

One of the objectives stated at the outset of this thesis was to show how it was that the benefits of the Paris waterworks system trickled up. From the data, it would seem that the benefits trickled up because of the concerted efforts of the Ontario Legislature, Paris council, and the Paris elite. The provincial government placed municipal political control in the hands of those who owned capital. Most of the electors and council members in Paris were relatively affluent. The provincial government also, through the Municipal Waterworks Act, 1882, regulated various aspects of waterworks development. Paris council determined where waterworks service would be provided. Paris council also determined, before the bureaucratization of waterworks in 1902, the price that different types of users, and sometimes that individual users, would pay for service. Council's discretion in these matters almost invariably favoured the local elite. The local elite advised council of their needs, and attempted to legitimate their needs to Parisians generally. When council became unresponsive to the needs of the elite in 1900, the local elite instigated the movement toward bureaucratization of the management of waterworks. These observations show, as stated in the introduction of this thesis, how the study of a particular issue such as waterworks can provide insight into broader questions concerning municipal government.

In this thesis, emphasis has been placed on the use of geographical analysis with a Marxist viewpoint. This approach is based on the premise that capitalist organization influences the spatial distribution of human artefacts. Social and spatial correlations are not coincidental but rather are to be expected, because human relations of production and social class struggle necessarily occur in space. The social hierarchy in the workplace implies a spatial hierarchy in the urban space. Marxist geographic analysis is thus useful in decoding the social effects of the unseen force of capitalism.

NOTES

1. Karl Marx, "The German Ideology," in Robert C. Tucker, ed., The Marx-Engels Reader (New York: W.W. Norton and Co. Inc., 1978), 172.

2. D.A. Smith, At the Forks of the Grand, vol. 2 (Paris, ON: Paris Public Library Board, 1982), 132.

3. Joy Parr, The Gender of Breadwinners (Toronto: University of Toronto Press, 1990), 37.

4. D.A. Smith, "The 1949 Strike Against Penmans, 1979" TMs, pp.29-30. This essay, according to Joy Parr, is available at the Paris Public Library. D.A. Smith deposited this essay many years ago at a half dozen university libraries in Ontario, including Queens University and the University of Western Ontario. The author obtained an original copy from D.A. Smith to use in this thesis.

5. Ibid., 30.

6. Parr, Gender of Breadwinners, 17.

7. D.A. Smith, At the Forks of the Grand, vol. 2, 133.

8. Minutes of the Town of Paris Council, 26 February 1906.

9. Ibid.

10. Paris Star-Transcript, 10 September 1902.

11. D.A. Smith, At the Forks of the Grand, vol. 1 (Paris, ON: Local Architectural Conservation Advisory Committee and the Paris Public Library Board, 1956), 71.

12. Penman Family Papers, Archives of Ontario, reference number MU2312, box 1.

13. D.A. Smith, At the Forks of the Grand, vol. 1, 71.

14. Penman Family Papers.

15. Ibid.

16. Paris Star-Transcript, 13 February 1907.

17. Parr, Gender of Breadwinners, 15.

18. Fred Bemrose, Curator of the Paris Historical Society and former Penman's employee, interview by author, March 1992, Paris, ON.

19. D.A. Smith, interview by author, 24 May 1991, Paris, ON, written notes.

20. Industrial and Picturesque Paris, Ontario (J.S. Brown and Son, 1901).

21. Parr, Gender of Breadwinners, 4.

22. D.A. Smith, At the Forks of the Grand, vol. 2, 131.

23. Funk and Wagnalls Standard Desk Dictionary (1975), s.v. "democracy," and "democractic."

24. Minutes of the Paris Public Utilities Commission, 24 December 1935.

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