

A LAND USE PLANNING ANALYSIS OF THE UNI-MUNICIPALITY
STRATEGY OF ADMINISTERING METROPOLITAN REGIONS

A Thesis Submitted To The Faculty of Graduate Studies
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In Partial Fulfillment of The Requirements
For The Degree of Master of City Planning

Stewart J. Duncan

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BY

STEWART JOHN DUNCAN

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ABSTRACT

Within Canadian metropolitan regions, various "regional planning structures" have not been relatively successful in their attempts to implement official regional plans with any substantive policies. This problem exists because these structures are not provided with any significant statutory powers: the decision-making and planning approval powers remains distributed among a multiplicity of municipal governments that collectively administer the metropolitan region (i.e. the jurisdictional strategy of multi-municipal administration). As a consequence, orderly land use planning of the metropolitan region is relegated as a priority.

In light of this problem, this thesis examined the alternative jurisdictional strategy of uni-municipality administration to consider if it would be more advantageous than multi-municipal administration, for achieving orderly land use planning of metropolitan regions. In examining this research objective, the following method was utilized:

1. The prominent reasons behind the emergence of the metropolitan region phenomenon and its unique land use zones were discussed;
2. The various land use problems of the rural-urban fringe area of the metropolitan region were discussed;
3. A land use planning strategy was presented - a strategy that is similiar in content to the official plans that regional planning structures are attempting to implement in Canadian metropolitan regions. The intention of the strategy is to

promote orderly and rational growth of a metropolitan region, and secondly, to prevent the land use problems of the rural-urban fringe area from recurring, or increasing in intensity.

4. The jurisdictional strategy of multi-municipal administration was discussed with respect to how it prevents the implementation of orderly land use planning - support evidence was provided with case studies of four metropolitan regions.
5. The jurisdictional strategy of uni-municipal administration was discussed with respect to its advantages for achieving orderly land use planning of a metropolitan region - support evidence was provided with a case study of the City of Edmonton "Horizon 21" annexation proposal, which represents a quasi-attempt to introduce a uni-municipality strategy within the Edmonton metropolitan region.

The thesis concludes by advocating that conceivably, the uni-municipality strategy has more advantages than a multi-municipal form of administration for achieving orderly land use planning in a metropolitan region.

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CHAPTER I

INTRODUCTION

A. Research Objective

The objective of this thesis is to examine the uni-municipality strategy of administering metropolitan regions to consider if it is a more appropriate alternative than multi-municipal administration with respect to only one principle of local government; namely, orderly land use planning.

Within the context of this thesis, the term uni-municipality strategy has been selected to represent not only a static form of government, but a dynamic process involved in achieving the establishment of a single municipal corporation with jurisdiction over all land that is within the spatial dimensions of a metropolitan region.

Within the context of this thesis, orderly land use planning is defined in accordance with the following two objectives. It is primarily intended to confront the land use problems of the rural-urban fringe area of metropolitan regions, so as to prevent them from recurring, or increasing in intensity. Secondly, orderly land use planning of the metropolitan region involves the rational and logical coordination of potential and existing land uses or activities in the rural-urban fringe area. These land uses or activities are coordinated in conjunction with the inevitable expansion demands of the built-up city.

A metropolitan region represents a particular type of

urban region. In spatial economic theory, urban regions evolve when a particular central place or settlement develops a sphere of influence over other central places. Urban regions are classified in relation to how they vary for four particular criteria: type of rural-urban fringe area land use, central city population, regional population, and convenient commuting time.

For example, one type of urban region is the farm-city region. With respect to the four criteria, the farm-city region has an agricultural type of rural-urban fringe land use, an average central city population of 3,300, an average regional population of 15,300, and a convenient commuting time period of fifteen to thirty minutes.¹

However, distinguishing the metropolitan type of urban region is not as simple with respect to the four criteria. The meaning of the term will depend upon the unique conceptual perspective that individuals such as academics or planning professionals have of a metropolitan region. For example, some of these individuals may consider a metropolitan region to have a maximum of 1,000,000 people, while others may feel 5,000,000 people represents an adequate population. As a result, it is virtually impossible to provide a standardized definition of the term metropolitan region in relation to the four criteria.

Consequently, within the context of this thesis, and with respect to the four criteria; metropolitan regions will be restricted to the following definition or description. Firstly, the land of the rural-urban fringe area will be

utilized for agriculture, or has the capability for such exploitation. Secondly, the average population size of the prominent central city is at least 300,000. Thirdly, the average population size of the overall metropolitan region ranges from 300,000 to a maximum of 600,000. Finally, the sphere of influence extends outward to a distance that represents a convenient commuting time period of forty-five minutes to one hour.

B. Research Problem

Metropolitan regions have evolved in Canada as a result of a process of urban-to-rural invasion. The various components of the urban-to-rural invasion process included, and continue to include: the intrusion of public transportation corridors, the extension of utilities or services, the imposition of urban-oriented land uses, the utilization of rural land for non-farm residential accommodation, and increased land speculation.

As a consequence of this process of urban-to-rural invasion, certain land use problems became apparent in rural areas. The most prominent problems were: irregular or non-contiguous land development, the termination of productive agricultural activities and the accompanying ramification of idle land, the creation of uneconomical land parcels, the expensive service demands of rural residential migrants or non-farm inhabitants, various environmental problems, and the loss of land for the purposes of recreation and mineral

extraction.

As a result of these problems that emerged after urban-to-rural invasion, the rural land adjacent to a built-up city was classified, or conceptually identified as the rural-urban fringe area. The juxtaposition of the unique rural-urban fringe area to the built-up city symbolized the emergence of a new geographical phenomenon: the metropolitan region. In Canada, the metropolitan region phenomenon was recognized in 1931.

In 1871, when the first census after Confederation was taken, Canada boasted only one city of over 100,000 population. In 1931, sixty years later, there were seven. By that time, a new phenomenon was appearing - the metropolitan area - which the census took account of for the first time in 1931 as 'the greater city.'²

Unfortunately, a significant number of years passed before senior governments responded with any institutional or jurisdictional alterations to account for the evolution of metropolitan regions, and secondly, to confront the land use problems of the rural-urban fringe area. Plunkett and George document this situation.

The post-World War II population expansion brought to the fore the difficulties confronting major urban and metropolitan areas where much of Canada's urban growth occurred. ... Virtually all such areas encountered very real difficulties in providing services and carrying out activities for the area as a whole. Effective planning of the development of such areas proved difficult if not impossible under existing institutional arrangements.³

Eventually, senior governments realized the necessity to impose a form of jurisdictional mechanism that would promote orderly land use planning of the metropolitan region. The initial Canadian jurisdictional response to the metropolitan region was the establishment of single-purpose districts.

Following the imposition of single-purpose districts, more innovative mechanisms were established. Examples of these structures include Alberta's regional planning commissions, the City of Winnipeg's Unicity-Additional Zone technique, and Ontario's two-tier regional municipalities.

Generally, these jurisdictional responses have not been successful in achieving orderly land use planning within their particular metropolitan regions. This lack of success has been largely due to the fact that these regional structures have never been accommodated with any realistic clout or power. Gertler corroborates this contention.

And from this point of departure it needs to be said that the inner logic of a system that produces regional or joint planning boards with neither the authority to dispose of the matters that are its unique concern, nor because of financial structures, with staffs qualified to do a competent job, leads not to joint planning but to joint frustration - accompanied by public disrespect and demoralization. 4

As a consequence of this lack of authority, official plans of these regional structures have been relatively innocuous and ineffective. In terms of content, the plans feature redundant statements of broad planning principles. The more desirable goal of including information about contentious issues is conspicuously absent. The plans represent a political compromise, or consensus of the various demands that are expressed by the divergent local municipalities. The plans demonstrate an absence of concern for important and crucial regional issues. This absence of any authentic or significant policy-making is documented by the Taraska Commission in their discussion of the regional municipalities of Ontario:

For example, in spite of fairly radical changes in the organization of the government of the regions, it seems that they are still viewed as essentially administrative in nature and that their principal preoccupation is still the supply of services, very much in the traditional way. Only rarely has any special attempt been made to incorporate any provision which will ensure or even encourage the emergence and development of policy-making as a major function of these governments. 5

These regional structures have never had any realistic hope of implementing orderly land use planning because decision-making authority has remained with the local municipalities that exist within the spatial boundaries of their respective regions. This anachronistic tendency to retain a multi-municipal jurisdictional situation is due to the political philosophy that senior governments advocate: most provincial governments are concerned about maintaining the status quo (or the existing municipal boundaries within a province), because any disruption of the status quo could mean a loss of voting and political support from parochial municipal interests.

The intention of this thesis is not to consider the prospect of whether senior governments will alter their political commitment of preserving the multi-municipal jurisdictional strategy of administering metropolitan regions; a strategy that does not encourage the implementation of orderly land use planning.

Instead, as indicated previously, the objective of this thesis is to examine the uni-municipality strategy to consider if it is a more advantageous alternative than multi-municipal administration for achieving orderly land use planning of a metropolitan region. Future growth of metropolitan regions further emphasizes the need to consider an alternative to multi-municipal administration.

In the future, urbanization will intensify considerably. Forecasts of its scale and distribution vary somewhat but the basic point is consistent and clear. In thirty years, Canada's population will number about 40 million. Something in the order of 90 or 95 per cent will be classed as urban. But most significant, it has been estimated that about two-thirds will be located in twelve major metropolitan areas. 6

C. Research Procedure

To investigate the research objective of this thesis, the following five-phase procedure will be utilized. Each of the five phases involves a separate chapter that precedes the seventh and final chapter (i.e. the concluding chapter).

The initial phase of the research procedure, or Chapter II, is a discussion of the spatial theory underlying metropolitan regions. The chapter describes the evolution of urban regions within the overall process of urbanization, and specifically outlines the unique characteristics of a metropolitan region. The major focus of the chapter is on the various components of urban-to-rural invasion that are responsible for the evolution of metropolitan regions. The chapter concludes with a description of the unique land use zones of a metropolitan region that become apparent after urban-to-rural invasion.

The second phase (Chapter III) features a description of the prominent land use problems that become apparent in the rural-urban fringe area of a metropolitan region after urban-to-rural invasion. Although physically located in the rural-urban fringe area, the land use problems are a concern for overall planning of the metropolitan region.

The third phase (Chapter IV) describes a strategy of orderly land use planning for a metropolitan region. The objectives of the strategy are to prevent the land use problems of the rural-urban fringe area from either recurring, or increasing in intensity; and secondly, to logically coordinate potential and existing land uses of the rural-urban fringe area with the inevitable expansion demands of the built-up city area. This particular strategy of orderly land use planning features four sequential phases that are designed to achieve these objectives.

The fourth phase (Chapter V) discusses why orderly land use planning of a metropolitan region (as described by the strategy in (Chapter IV) has never been implemented with any significant success in Canadian metropolitan regions. The essential reason is the anachronistic jurisdictional policy of administering metropolitan regions with a multi-municipal strategy (i.e. a policy of administering metropolitan regions with a multiplicity of municipal governments that have separate official plans and divergent development philosophies). This chapter describes how multi-municipal administration prevents the implementation of orderly land use planning by initially, discussing various general reasons; and secondly, by examining the lack of success demonstrated by four Canadian regional planning structures that have accompanying multi-municipal power foundations.

The final phase (Chapter VI) discusses the alternative to multi-municipal administration of a metropolitan region (i.e. a uni-municipality strategy). The objective of the chapter is to determine if uni-municipal administration is more appropriate than multi-municipal administration for achieving orderly land use

planning in a metropolitan region. The chapter investigates this particular objective by examining the City of Edmonton "Horizon 21" annexation proposal. Horizon 21 represents a quasi-attempt to provide uni-municipal administration within the Edmonton metropolitan region.

D. Evaluation of Sources

Information for this thesis was acquired by reviewing applicable literature, conducting a mail survey, and by interviewing appropriate individuals. Much of the information that is presented in this thesis is gleaned from text literature, private consulting studies, governmental reports, newspaper articles, and other Department of City Planning (University of Manitoba) theses. These sources provided the information base in the preparation of Chapters II to IV.

Information in Chapter V was primarily acquired through a mail survey, and interviews of qualified individuals in the planning profession. General questionnaires were distributed to directors of regional planning structures in Calgary, Hamilton, and Ottawa; and direct interviewing was conducted in Winnipeg. Unfortunately, the responses were either too general and non-committal; or if the responses were specific and informative, the respondents requested confidentiality for their remarks. Although these professionals provided the writer with significant insights, the information that is actually presented in the chapter is acquired from sources such as newspaper articles or governmental reports. Consequently,

the information that is presented in this thesis is not as precise or accurate as would have been desired.

Information in the final phase of the research procedure, or Chapter VI, was mainly acquired through an analysis of a number of governmental documents and private consulting reports: especially, the "Long Term Planning Analysis - Edmonton Annexation Project" document prepared by the Mackenzie-Spencer Planning Consultants firm. These documents represented extremely adequate sources of information with respect to the Horizon 21 annexation proposal (or quasi-strategy of uni-municipal administration).

Generally, the various sources that were utilized to research the objective of this thesis were very informative, and as contemporary or recent as possible. To reiterate, it is only unfortunate that the subjective-qualitative nature of this thesis prevented the acquisition of more accurate and authentic survey responses.

E. Footnotes

1. Carle C. Zimmerman and Garry W. Moneo, The Prairie Community System (Ottawa: Agricultural Economics Research Council of Canada, 1970) p. 77.
2. Donald C. Rowat, The Canadian Municipal System (Toronto: McClelland and Stewart Limited, 1969) p. 65.
3. Thomas J. Plunkett and Marcia George, "Alternative Forms of Government Organization in Metropolitan Areas" (Winnipeg: Institute of Urban Studies - University of Winnipeg, January, 1979) p. 1.
4. L.O.C Gertler, Regional Planning In Canada (Montreal: Harvest House Ltd., 1972) pp. 30-31.
5. "Report and Recommendations of The Committee of Review - The City of Winnipeg Act" (Winnipeg: Queen's Printer of Manitoba, October, 1976) ppp 5-6.
6. Lionel D. Feldman and Michael D. Goldrick, Politics and Government of Urban Canada - Second Edition (Toronto: Methuen Publications, 1972) pp. 2-3.

CHAPTER II

A DISCUSSION OF THE GEOGRAPHICAL BASIS OF THE METROPOLITAN REGION

A. Introduction

This chapter will commence with a conceptual review of the urban region phenomenon as it relates to the rudimentary geographical concept of a hierarchy of central places. Following this preliminary concern, the factors behind the evolution of a metropolitan region will be discussed (i.e. the various components of the urban-to-rural invasion process). Finally, this chapter will conclude with a description of the unique land zones that are ramifications of the geographical evolution of a metropolitan region.

B. The Relationship of The Hierarchy of Central Places Concept To The Urban Region Phenomenon

Urban geographers study a settlement or urbanized site in relation to its position among other settlements. This form of inter-urban analysis is employed to determine a settlement's position within an urban hierarchy.

In structure, the hierarchy of cities can be likened to a pyramid. The pyramidal shape results from the fact that there is a greater number of smaller cities than large ones in the urban pattern. Thus the number of cities at each level in the hierarchy decreases as one moves upward through it. Conversely their functional structure becomes increasingly more complex at successively higher levels in the hierarchy. 1

Such an urban hierarchy is termed a hierarchy of central places. A central place will maintain a position within the hierarchy as a result of its population size, and of most significance, its number of central functions.

The retail and service businesses they provide are known as central functions, and these are supplied by establishments (retail stores and service offices). When more than one central function is provided by a single establishment, each is counted separately and called a functional unit. 2

Central functions will survive in a particular central place if the population is large enough to guarantee its continued existence. For any economic function, the central place must possess an adequate population to generate the necessary "survival" revenue. The minimum revenue that is required for the survival of an economic function is classified as the threshold amount. The higher the threshold, the more likely a larger population size is necessary for survival of a central function.

Consequently, only certain central places will contain the central functions requiring high thresholds. These central places are categorized as having higher centrality or nodality than other central places. These higher-order central places appear less frequently in geographical space and are quite distant from each other. Berry and Horton offer a commentary on this characteristic of higher-order central places.

The value of nodality is determined by the number of possible services rendered, goods procured, contacts made, etc., at a place without additional movement or circulation after the initial trip. Nodality can, thus, be defined as a behavioral act of man, not simply a geometric point or circulation intersect. 3

These higher-order central places with high centrality or nodality have the potential to economically dominate lower-order central places within the hierarchy. The modified illustration of Christaller's model (see Figure 1⁴) depicts a hierarchy of central places on a theoretical plane, and demonstrates the potential situation of one higher-order central place being capable of dominating a number of lower-order central places.

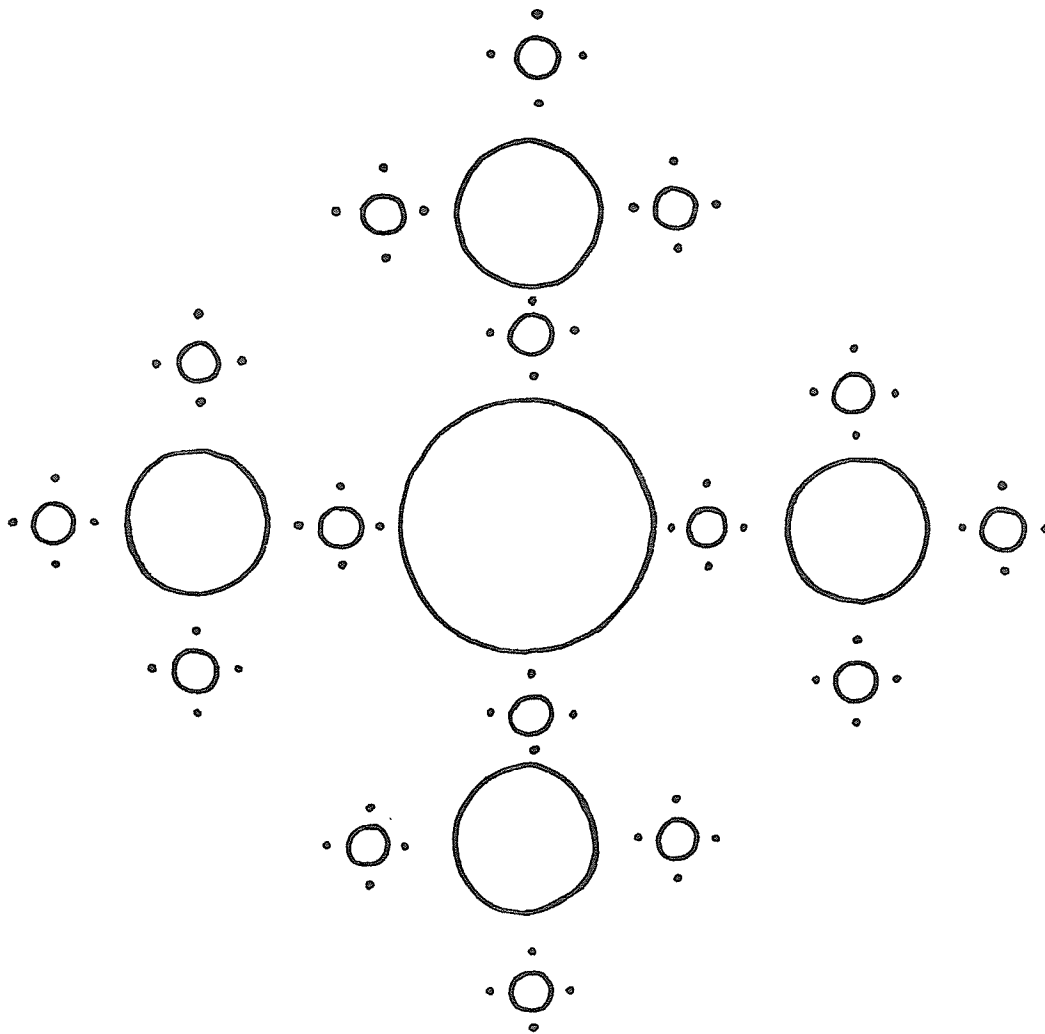


FIGURE 1 - MODIFIED CHRISTALLER MODEL OF A
HIERARCHY OF CENTRAL PLACES

As the model in Figure 1 demonstrated, a higher-order central place can develop economic linkages and dominate smaller central places due to its higher centrality within the urban hierarchy. As a result of creating these inter-urban linkages, the higher-order central place develops a sphere of influence. Demarcating such a sphere of influence within an urban hierarchy designates an urban region. Dickinson provides a pragmatic perspective of this unique geographical situation.

The modern city is consequently no longer a compact settlement unit. It is becoming the headquarters of a group of interrelated towns and satellite settlements, yet forming one community centred upon the city. This close interrelationship between widely scattered places, forming an integrated functional unit with its nerve centre in the city, is the essential characteristic of modern society. 5

One unique type of urban region is the metropolitan region. As indicated in the previous chapter, a metropolitan type of urban region has the following characteristics within the context of this thesis.

Firstly, peripheral land within the sphere of influence boundaries is utilized for agricultural purposes, or has the capability for such exploitation. Secondly, the average population size of the prominent central city is at least 300,000. Thirdly, the average population size of the overall metropolitan region ranges from 300,000 to a maximum of 600,000. Finally, the sphere of influence extends outward to a distance that represents a convenient commuting time period of forty-five minutes to one hour.

C. The Evolution of A Metropolitan Region:

The Process of Urban-To-Rural Invasion

From a theoretical perspective, the evolution of a metropolitan region is simply based upon the creation of economic linkages between a higher-order central place and a host of lower-order central places. From a pragmatic perspective, metropolitan regions have evolved as a result of a number of factors involved in the process of urban-to-rural invasion. These include the intrusion of transportation corridors, public servicing provisions, numerous urban-oriented land uses, rural residential development, and the activity of land speculation.

1. Public Transportation Development

With the spreading use of the private automobile as a mode of transportation, and an increased disposable income for most people; the ownership of private automobiles increased significantly in the earlier decades of this century. This made the "hinterlands" of cities quite accessible, and the result was a demand for the development of more public transportation corridors. The transportation corridors linked rural settlements with the major city, but as a consequence, agricultural holdings were severed and the rural settlement pattern was disrupted.

As a result of providing access, the public transportation corridor served as a catalyst for the eventual intrusion of other components of the process of urban-to-rural invasion.

2. Public Servicing Provisions

As a result of the access factor, rural areas became valued as potential land development locales. Consequently, service or infrastructure provisions such as sewer or watermain, gas lines, and overhead hydro lines were extended beyond the built-up city. These provisions guaranteed that raw land in rural areas would be "economically" attached to the city.

3. Urban-Oriented Land Uses

The rural areas were invaded by a number of urban-oriented land uses such as recreational, institutional, industrial, utilities, and commercial activities.

As a result of the lack of aesthetic or functional recreational space in built-up cities, the rural areas were invaded for the following uses to satisfy the recreational or leisure demands of city inhabitants: cottaging, camps, resorts, lodges, wildlife preserves, nature sanctuaries, adventure parks, trailer courts, golf courses, archery-rifle ranges, airfields, horse racing tracks, auto racing tracks, kennels, ranches, and hobby farms.

Rural areas were exploited for institutional uses such as penitentiaries, detention centres, and mental hospitals; so as to protect urban inhabitants from the "deviant or abnormal" nature of institutional residents.

Industrial uses such as abattoirs, cement plants, quarries, construction sites, chemical plants, oil and gas refineries, trucking terminals, and junk-yards located in rural areas to acquire the buffer space that was required to protect urban

inhabitants from the hazardous nature of their activities.

Utilities and municipal services such as gas or oil pumping sites, hydro stations, communications towers, sewage lagoons, incinerators and landfill sites sought rural refuge for the same reason as industries (i.e. to protect urban residents from potential hazardous situations).

Finally, due to the exploitation of transportation corridors and the availability of vacant land, rural areas were exploited by a multitude of commercial land uses as Russwurm illustrates.

Large regional shopping centres are thus initially usually located in the urban fringe to take advantage of both the city population and population outside. ... Urban fringe areas are also logical locations for large shopping centres. Large areas of relatively cheap land (fifty acres or more) and access to population and transportation links are usually there. ... The scattering of ribbons of commercial establishments along our urban fringe highways, like drive-ins, motels, service stations, and fruit stands, are of this type. Basically these latter examples are highway-oriented, dependent on capturing part of the money in the pockets of the people driving by. 6

4. Rural Residential Development

The rural residential form of land development represents one of the most influential factors behind the evolution of a metropolitan region. Separately, one rural residence has the following characteristics.

The committee defines rural residential as residences on lots of one half acre to twenty acres, unrelated to farm activities, physically separated from existing communities and using independent sewage treatment facilities and water supply, the residents of which rely upon existing communities for employment and other services. 7

Rural residential development commences very innocently with the acquisition of agricultural land for the purpose of constructing a non-farm residence. The evolution of a

metropolitan region is promoted or enhanced when a number of individuals invade the rural landscape with comparable intentions.

It is quite possible that change of residence to rural areas can be dictated by economic necessity such as employment opportunities, or by social preference such as proximity to friends or relatives; but most probably, rural residential migrants will have departed for the following reasons:

- Appeal of less congestion
- Aesthetic or scenic advantages such as tree stands, water-courses or undulating terrain
- Rural atmosphere and historical nature of existing villages
- Less crime or deviancy
- Opportunity to construct home
- Availability of ample raw land for buffer spaces and privacy
- Opportunities for gardening, hobby farming, and animal domestication
- Freedom from urban obligations such as associations or clubs
- Lower land prices and property taxes
- Less restrictions on land uses and activities

Rural residents can be generalized as having the following two prominent characteristics. Initially, according to Robin Pryor, rural residents are usually young couples or in a younger age group and therefore have a higher fertility ratio than the population resident in the built-up city.⁸ Secondly, rural residents are essentially totally dependent upon the built-up city for economic survival as the following excerpt corroborates

in reference to "exurbanites."

There is no such thing as an universally typical exurbanite; the only thing that exurbanites all seem to have in common is that firstly they live outside incorporated centres and secondly depend greatly on the urban area, not only for services, but for employment and other needs. 9

5. Land Speculation

The activity of land speculation represents the final component of the urban-to-rural invasion process to be discussed.

Land speculation represents a situation whereby an individual acquires title to a parcel of land at low cost, and holds the title in the expectation or hope that the land will appreciate in value. As a result, the land can be sold for a price above the original purchasing costs; and profits of varying amounts will be reaped.

The activity of land speculation is an integral component of the urban-to-rural invasion process because it expedites the conversion of inexpensive rural land into metropolitan region land with high urban value. Any success in land speculation will depend upon land values rising more than annual holding expenses. The Winnipeg Land Prices Inquiry Commission Report outlines the holding costs incurred by a typical land speculator.

Speculators who could not obtain bank loans because they had fully used up their bank credit - or had none to start with - might borrow money from private lenders who would charge interest at the rate of twenty or so percent. A speculator would borrow at such rates only where he anticipated quick resale at a big markup. The lender, while obtaining a high rate of return, had insecure coverage for his loan. Having regard to all the costs involved - the interest payable on borrowed money, the taxes levied by municipalities, legal fees and real estate commissions -

the price of a piece of land bought by a speculator would have to rise by at least 10-15 per cent a year for him to break even. 10

In light of such exorbitant expenses, and the uncertainty of whether land values will rise; land speculation is not a guaranteed profitable venture. Consequently, the successful speculator will be the individual who creates a major appreciation in the value of his particular land holding. Without expending any land improvement capital, the successful speculator will ensure such appreciation in land value by making his land holding more economically attractive than other parcels. This type of shrewd bargaining promotes the extension of a city's economic influence well beyond its built-up boundaries, and enhances the geographical expansion of an isolated city into a metropolitan region.

A successful speculator will usually increase the land value or economic attractiveness of his land by influencing and gaining the support of local politicians or decision-makers. The speculator who convinces elected officials to locate or install public land uses or infrastructure on, through, or within economic proximity of his land holding will most assuredly be guaranteed of a substantial appreciation in land value. The result is a windfall profit for the speculator, but high land prices for future buyers as the following anecdote reveals.

In Northwest Winnipeg, a market gardener sold his 32 acres in 1973, for \$64,000, or \$2,000 and acre. In 1977 new owners were listing it at \$500,000. This year they are asking \$688,000 or about \$21,000 an acre. That's just a bargaining price and the owners won't get that today.

But when development extends there in the future, there is every likelihood the owners will get their price, or perhaps more. ... It will become valuable, not because of any contribution of the owners. They haven't spent a cent to improve the property. It's just raw land. They are going to benefit from the huge expenditures the city will have to make in providing roads and other services to open the new area. ... Land appreciates in value, but not because of contribution by speculators. It is the community that makes the raw land valuable through the provision of trunk watermains and sewers, arterial roads and other services. 11

As well, the speculator can guarantee an appreciation in value of his land by convincing local politicians to re-designate official land use plan classifications, or to ratify re-zoning applications. These amendments of the legal status of land will usually guarantee an appreciation in land value.

The land speculator may not wish to develop the land the way the planner desires, and the speculator may be influential enough to persuade the elected council, which has final authority, to act contrary to the desires of the planner. 12

D. Land Use Zones of A Metropolitan Region

The previous section outlined and described the major components of the urban-to-rural invasion process: a process that represents the essential factor behind the evolution of metropolitan regions as unique geographical situations.

The geographical space of metropolitan regions can be delimited into four distinctive land use zones that become apparent after urban-to-rural invasion. (Within the context of this thesis, land use zone is to be interpreted as a conceptual description, and not as the planning mechanism that provides legal status to land designations of an official

plan.)

Initially, and most obviously, there is two land use zones which comprise the built-up area of the metropolitan region. The most notable or central zone of the built-up area is the original city zone with the highest population density, land prices, and building heights. Adjacent to this central zone is the suburban zone with lower population densities and land prices, and generally, horizontal residential and accompanying land uses.

Beyond the built-up area is the rural-urban fringe area with the urban fringe zone adjacent to the suburban zone, and the rural fringe zone on the periphery of the metropolitan region. These latter terms are employed by Robin Pryor and he describes these two zones of the overall rural-urban fringe area.

Within the rural-urban fringe it may be possible to identify:

1. The urban fringe, that subzone of the rural-urban fringe in contact and contiguous with the central city, exhibiting a density of occupied dwellings higher than the median density of the total rural-urban fringe, a high proportion of residential, commercial, industrial and vacant as distinct from farmland - and a higher rate of increase in population density, land use conversion, and commuting; and
2. The rural fringe, that subzone of the rural-urban fringe contiguous with the urban fringe, exhibiting a density of occupied dwellings lower than the median density of the total rural-urban fringe, a high proportion of farm as distinct from non-farm and vacant land, and a lower rate of increase in population density, land use conversion, and commuting. 13

Since the rural fringe zone would be influenced by other central places within an urban hierarchy, it would be conceptually appropriate to contend that a metropolitan region would only extend into the rural fringe zone about half-way.

Therefore, a metropolitan region can be considered as encompassing the geographical space of the original city, suburban, and urban fringe zones; and an estimated fifty percent of the peripheral rural fringe zone (see Figure 2).

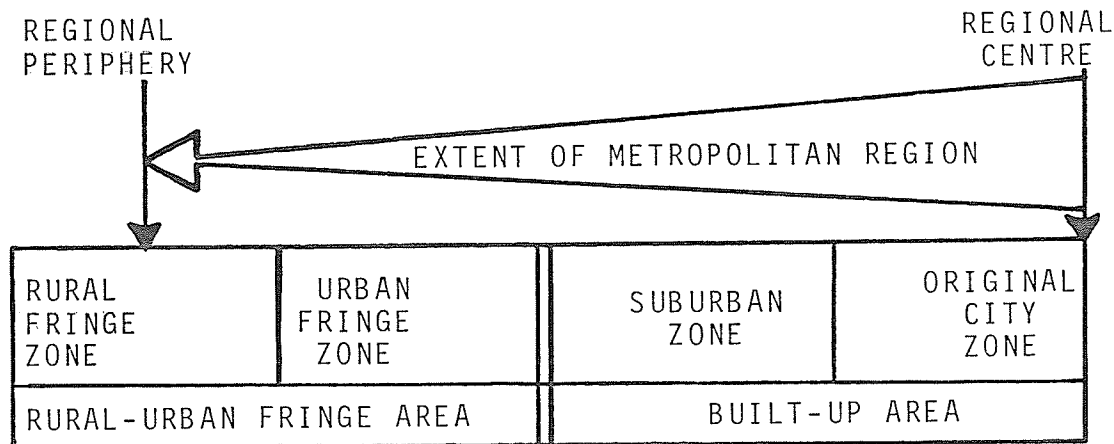


FIGURE 2 - LAND USE ZONES OF A METROPOLITAN REGION

E. Summary

Conceptually, it has been demonstrated that metropolitan regions evolve when a higher central place links economically with lower central places to become a dominant central place within the hierarchy. Pragmatically, metropolitan regions have evolved as a result of a process of urban-to-rural invasion. This invasion process commences with the installation of public transportation and servicing; and becomes more intrusive with the additional impact of urban-oriented land uses, rural residential development, and land speculation. Following the geographical establishment of metropolitan regions, four distinct land zones can be identified: original city, suburban, urban fringe, and rural fringe zones.

F. Footnotes

1. Maurice H. Yeates and Barry J. Garner, The North American City (New York: Harper and Row, 1971) p. 56.
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4. W. Christaller (edited by C.W. Baskin), Central Places In Southern Germany (Englewood Cliffs: Prentice-Hall Inc., 1966).
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6. Lorne H. Russwurm, "Urban Fringe and Urban Shadow" in R. Charles Bryfogle and Ralph R. Krueger (eds.), Urban Problems (Toronto: Holt, Rinehart and Winston of Canada Limited, 1975) p. 162.
7. Second Year Master of City Planning Class, "The Nature of Demand For Exurbia Living - Winnipeg Region Study" (Winnipeg: Department of City Planning - University of Manitoba, 1974) p. 4.
8. Robin J. Pryor, "Defining The Rural-Urban Fringe" in Larry S. Bourne (ed.) Internal Structure of The City (Toronto: Oxford University Press, 1971) p. 63.
9. Second Year Master of City Planning Class, op.cit., p. 13.
10. "Report and Recommendations of The Winnipeg Land Prices Inquiry Commission" (Winnipeg: Queen's Printer of Manitoba,

1977) pp. 40-41.

11. Val Werier, "Profits On Land Should Go To The Public"
(Winnipeg: The Winnipeg Tribune, November 2, 1978) p. 10.
12. Russwurm, op.cit., pp. 159-160.
13. Pryor, op.cit., pp. 62-63.

CHAPTER III

LAND USE PROBLEMS ASSOCIATED WITH THE DEVELOPMENT OF A METROPOLITAN REGION

A. Introduction

The objective of this chapter is to describe and outline the various land use problems that physically occur in the rural-urban fringe area.

As indicated in the previous chapter by definition, a higher-order central place can dominate lower-order central places within a hierarchy. The result is the development of a metropolitan region. The intrusion of urban land uses or activities into rural areas has the primary ramification of creating a rural-urban fringe area: an area of two land zones (urban fringe and rural fringe - see Figure 2) that feature a number of land use problems.

Although these problems physically occur in the rural-urban fringe area (particularly, the urban fringe zone), they are significant concerns for the entire metropolitan region. It is these specific problems that must be considered if the total land mass of a metropolitan region is to be planned in an economic and orderly manner.

B. Prominent Land Use Problems of The Rural-Urban Fringe Area

1. Irregular/Non-Contiguous Land Development

Irregular or non-contiguous land development tends to appear upon the landscape of rural-urban fringe areas in two prominent forms: "ribbon" and "leap-frog" development.

"Ribbon" development represents a situation where a major highway or transportation corridor is invaded on both sides by various urban-oriented land uses such as motels, service stations, fast food outlets, etc. These corridors are designed for non-stop/high-speed traffic, and are intended to link settlements. With the imposition of urban-oriented land uses, the corridor's intended function is destroyed. "Ribbon" development is extremely costly as it is very expensive to restore a highway corridor's original function through design adaptations such as service roads. As these adaptations or improvements are necessitated by the impact of urban-oriented land uses, it is obvious that "ribbon" development represents a serious problem of the rural-urban fringe area.

"Leap-frog" development is described in the following excerpt.

The frontier of urban land use or building will not move slowly and regularly, taking in all land as it goes; instead, development will leap ahead to more distant tracts, passing over nearby ones, taking in some large and some small tracts, and leaving others of assorted sizes. 1

"Leap-frog" development represents an extremely undesirable problem as non-contiguous land development is wasteful of land, and it prevents orderly and coordinated planning of land in a metropolitan region.

It should be emphasized that contiguous and regular development of a city, in conjunction with the rural-urban fringe area; is not always feasible in a metropolitan region due to physical terrain obstructions, competing land uses such as recreational space or protected ecological areas, and prioritized economical land uses such as mineral extraction sites or capital-intensive agricultural operations.

However, these types of factors that justify any irregular or non-contiguous development are not that influential in the context of an overall metropolitan region. Therefore, "ribbon" and "leap-frog" forms of development should not be so visible as problems in rural-urban fringe areas of metropolitan regions. Unfortunately, these forms of irregular or non-contiguous land development occur as a result of decisions made by individuals such as speculators, developers, and politicians. These decisions have a number of different perspectives.

Certain parcels of non-contiguous land will receive prioritized development approval due to physical attributes that are more attractive than other parcels adjacent to the built-up area. For example, the soil composition of a non-contiguous parcel may be more appropriate than contiguous parcels for housing developments that require septic systems. Certain non-contiguous parcels with aesthetic features such as tree stands or an adjacent watercourse will be developed to capitalize on the higher real estate values than contiguous parcels without such features.

Irregular development seems to be a ramification of a free enterprise system that encourages competition among developers and speculators.

One cause of sprawl is the independence of decision among monopolistic competitors, each acting independently and without collusion. The competitors hold a variety of expectations about the future and a variety of demands for the rate of compensation. Rapid expansion of the economic base of a housing area tends to prompt many developers to respond to the demand for housing and produce a variety of discontinuous unrelated developments. The more rapid the rate of growth of an area and the greater the number of business firms operating in the housing market area, the greater the number of fragmented randomly located projects. 2

This type of political philosophy that allows independent competitors to act without concern for their actions is evident in a number of ways. For example, speculators will promote irregular development by acquiring the titles to parcels that are proximate, or in the midst of a major land holding that seems logically destined for private or public development.

Irregular development is promoted by the individual "quirks" or economic situations of property owners who have differing priorities and preferences as to when his land should be sold. Some property owners have minimal capital, and can not always afford the expenses that are associated with holding land until the "proper time to sell" arrives. These individuals will usually dispose of their land commodity as soon as minimal profit is apparent. Other individuals with sufficient capital or liquid assets can afford to be more patient in their holding of land, and will

keep land idle as they await a "windfall" profit. As a result of these varying mentalities and profit motives of property owners, it is not anomalous to have irregular development as a ramification.

Gaffney provides a description of how irregular development can result from these individual competitors who create situations such as an artificial scarcity of land. He contends,

...that urban land prices are uneconomically high, that the 'scarcity' of urban land is an artificial one, maintained by the holdout of vastly underestimated supplies in anticipation of vastly overestimated future demands. I think this uneconomical price level imposes a correspondingly uneconomical growth pattern on expanding cities. High land prices discourage building on vacant lands best situated for new development and divert resources to building highways, utility networks, and whole new complexes of urban amenities so as to provide and serve substitute urban lands further out - substitutes for something that is already in long supply. 3

Overall, the problems of irregular and non-contiguous development result from decisions made by these independent competitors such as speculators or developers. These decisions are approved as a result of most local governments having a political philosophy that coincides with the objectives of these independent competitors (i.e. favourable to private enterprise or pro-development). Russwurm confirms this contention:

But so strong is our private enterprise money-making motive that often planning of the overall community is sabotaged by irregular development aimed at individual satisfaction rather than group benefit. 4

2. Termination of Productive Agricultural Activities and The Ramification of Idle Land

The development of a metropolitan region is characterized by some significant economic changes in the rural-urban fringe area: land assessment, property taxes, land costs, and land value all rise above previous levels. These simultaneous reactions have an immediate and collective impact on land being utilized for agricultural production.

As scattered residential subdivisions locate in farming areas land values in general tend to increase in the area. Consequently, the farmer discovers that the assessed value on his land also increases. ... Any increase in land assessment results in subsequent increase in land taxes. The increase in assessment combined with a general increase in the mill rate due to increased services gives rise to farm land supporting a tax load in excess of the normal relationship between long term flow of income from agricultural production and property taxation. 5

These economic changes in the rural-urban fringe area are usually accompanied and supported by political commitment. Local government officials can boost the value of rural-urban fringe land by changing its legal status through official plan amendments and re-zonings. For example, this type of political commitment is evident on the periphery of Winnipeg in the Rural Municipality of West St. Paul. As the following excerpt discloses: the process of urban-to-rural invasion, and accompanying changes of the legal status of land, have combined to provide rural-urban fringe land with increased economic potential.

The value of agricultural land in West St. Paul does not appear to bear any significant relationship to its agricultural ability. For example, land values have greatly increased since 1975. These adjustments in real estate value may in part be a response to the re-designation of West St. Paul from an 'Area of No Expansion' to one of 'Limited Urban Expansion' and in part to the

inflationary pressure brought on by the purchase of substantial acreage by holding companies and absentee investors. Farmland today is priced on average 2 to 3 times its agricultural value. In some locations of extreme it is priced at over 8 times its agricultural value. 6

As a result of these economic changes in the rural-urban fringe area, agricultural production becomes an uneconomical venture. The exceptions are agricultural activities such as market gardening, orchards, or dairy operations. These types of agriculture survive due to two reasons. Firstly, these activities are capital-intensive and more profitable than most agricultural activities. As a result, they are able to accommodate the increased financial obligations associated with changing economic features such as higher taxes or ~~assess~~ assessment. Secondly, these activities are protected by senior government regulations, as they must be proximate to the built-up city to accommodate urban demand for dairy and cash crop products.

However, with the exception of these latter types of agriculture, most agricultural production will be uneconomical as the revenue produced from the land will be below production costs (which are rising gradually); and of most consequence, below the associated costs of holding title to the land (which are rising exorbitantly). As this situation is not profitable, the farmer is forced to relinquish title to his land. The unfortunate ramification for the metropolitan region is the termination of agricultural production as the land's most economical use. When the market for potential urban development land is in a high demand situation, even marginal land being

utilized for livestock or feed lot operations becomes extremely valuable. The result is further termination of viable and productive agricultural activities.

The termination of agricultural production in the rural-urban fringe of a metropolitan region seems destined to continue if the situation on the periphery of Winnipeg in the Rural Municipality of East St. Paul represents a harbinger of future development.

The number of farms in the Municipality decreased from 128 farms in 1961 to only 66 farms in 1971. The acreage devoted to agricultural production decreased from 7352 to 4506 acres within the same ten year period; a reduction of 38.7%. Considering that the total acreage of East St. Paul is about 8640 acres, the agricultural use of land declined from 85% of total land area in 1961 down to 52% by 1971. Of the 66 farms recorded in 1971, only 12 had annual sales in excess of \$5,000 and most had less than \$2,500 annually. 7

The termination of productive agricultural activities on rural-urban fringe land represents a major problem when the previously productive land is sold to investors. New owners of former productive land will have varying preferences as to the land's use while it is being held for speculative gain. Overall, the ramification is that the new owners will allow the land to be idle or vacant; and therefore, unproductive. Some owners will allow the land to be utilized for agriculture, but the production is usually insignificant. Either way, the land's productive capacity is not exploited due to the speculative holding motive. These actions represent an extremely wasteful situation.

Furthermore, some speculators prefer to keep their land perpetually idle as a contingency if the "appropriate selling

time" should occur during a growing season. Some speculators will lease their land for agricultural production, but nonetheless, tenancy farming is considered as tantamount to idle land for a number of reasons. For instance, any form of productive agriculture requires continued capitalization, and tenant farmers are apprehensive about dispensing with capital to improve land that is projected for speculative sale. Consequently, agricultural production from unimproved land has minimal quality and reaps low revenue. Moreover, the typical tenant farmer in the rural-urban fringe area is usually inexperienced and inclined to be a "hobby or weekend" farmer. This type of tenant farmer will most probably have a frivolous or hedonistic approach to farming with the inevitable result being inefficient production. Finally, tenant farmers are renowned for cropping land quite intensively. The consequence of these actions are unproductive soils, and therefore, low quality and uneconomical production. This situation of vacant or unproductive land seems to be well documented as the following planning study emphasizes in reference to the Rural Municipality of West St. Paul on the periphery of Winnipeg.

Although large parcels of land exist in West St. Paul and are used for agricultural purposes, an alarmingly large acreage appears to be lost for viable agricultural pursuits. Further investigation revealed that of the remaining farmlands approximately 4,500 acres are owned by absentee landowners and holding companies. ... For example, approximately 38% of the estimated agricultural lands in West St. Paul are owned by investors who do not farm and who live outside the municipality. 8

The speculative acquisition of previously productive agricultural land creates another unique situation related to the problem of idle land. Associated with idle land is the undesirable feature of premature subdivisions on the rural-urban fringe landscape. Russwurm describes a "premature subdivision" and portrays the inevitable circumstances.

This term refers to subdivisions that are laid out with some building beginning before complete urban services are available (particularly arterial roads, and trunk sewer and water lines)... Demand for housing may be misjudged to such a degree that the subdivision develops spasmodically, or even worse, is never completed. The end result of premature development in the urban fringe is a misused and improperly planned landscape. For an individual living in such a premature subdivision only inconvenience results. Unsightly weeds on vacant lots surround his property, muddy and dusty roads are his access routes, most urban services are not available. 9

3. Creation of Uneconomical Land Parcels

As a repercussion of a number of factors, large land holdings in the rural-urban fringe area will be fragmented into small, uneconomical land parcels. For example, individual competitors in the land market have a tendency to eliminate their debts, or acquire operating capital by subdividing their land holdings and selling various portions. As well, speculators or real estate agents will prefer to dispense with marginal land or unprofitable land that is part of a major holding. This type of desire will usually necessitate the subdivision of a large holding into smaller parcels. These individual actions and the intrusions of public installations such as highway construction or right-of-way acquisitions combine to carve the rural-urban fringe into small land parcels.

Small land parcels are uneconomical, and of "problem"

status due to the following reasons. Initially, the urban fringe zone of the rural-urban fringe area is considered the most logical and rational locale for new housing developments as it is contiguous to the built-up area. Prospective home builders or land developers that are interested in constructing a contiguous subdivision of residential dwellings; will encounter numerous difficulties in assembling land for such a development if a plethora of small land parcels exist (each with individual owners and separate preferences). Assembling land for housing developments will never be expeditious and free of major legal confrontations if the proposed subdivision location is owned by a multitude of individual owners. As well, the expenses associated with the assembly of land are much higher for the acquisition of smaller parcels as Russwurm describes in his analysis of the disadvantages of land fragmentation. " It helps drive up land values generally since smaller parcels are almost always worth more per acre or square foot. "10

Secondly, the difficulties encountered in assembling land for residential use, as a result of small parcels; would be similar for other land uses contemplating location in the rural-urban fringe area: industrial parks, shopping centres, or public amenities such as parks or airports.

Finally, the severance of large land holdings into small parcels has a very deleterious effect on the continuity of productive agricultural activities. A number of perspectives can be discussed. Economic farming of grains can only survive

on large land parcels that adjoin each other. Parcels of less than eighty acres are not efficient for grain farming, especially if the parcels are not contiguous with the primary farm holding. As a result, dispersed parcels of a small size are usually left vacant or idle. Economical livestock farming requires large contiguous holdings as this type of agricultural activity has concerns such as animal waste disposal. The large holdings are required to prevent the livestock farming activities from causing any environmental pollution with neighbouring property owners. As this type of farming is an expansion-oriented activity, small parcels would obviously prevent the farmer from expanding the capacity of one's operations.

4. Expensive Service Demands of Rural Residential Migrants/Non-Farm Inhabitants

Rural residential development occurs within the rural-urban fringe areas of metropolitan regions as an amorphous or haphazard form of land development. As a type of land use, some local governments welcome it for its property tax revenue. Other municipal governments maintain a rural preservation philosophy and divert such development to other municipalities. Whatever the political environment, rural residential development inevitably appears upon the landscape of rural-urban fringe areas. The paramount problem of this development is the dissatisfaction that new rural residents experience with existing services that are intended for farm residents. The problem intensifies as the new rural residents demand improved services. Inevitably, their demands are

converted into political decisions.

It was found that in Ontario exurbanites who were dissatisfied with the level of services, went so far as to run for local council and in several cases were elected. Being elected they were then in the position to push their demands which were paid for by the local municipal government and thus was an expense to the original inhabitants. 11

The demands of rural residents for urban-oriented services represents a problem due to the uneconomical relationship of urban services to the rural residential form of land development. Rural residential development features individual lots with frontages and depths that are, minimally, twice as long and deep as the ubiquitous "R1" urban lot for detached housing. As a consequence, the cost of installing urban infrastructure in rural residential subdivisions is quite exorbitant.

Services and utilities such as roads, ditches, watermain, sewers, power and gas lines are costly in proportion to their length. It is therefore important that each household should be served by the minimum possible frontage length. With this in mind one typical sprawl area was examined and it was found that the average frontage per household was 215 feet. If the building lots involved had been located in a fully developed urban area they would have required only 85 feet of frontage each. In other words, the average household in the area is responsible for two and a half times as much utilities and services length as is necessary. 12

Rural residential development generates an inequitable increase in the cost of existing services such as road maintenance and school transportation; and secondly, it creates a demand for the institution of urban-oriented services such as separate police and fire protection, open space acquisition, recreation programming and facility construction, mail delivery, refuse collection, etc. These types of services are extremely

expensive and could only be facilitated through an enormous increase in municipal revenue. Many local governments assume that the influx of rural residents and their property tax revenues will be sufficient to balance the increase in expenses that would be necessitated by their demands for improved services. This assumption is extremely erroneous, due to the well-documented fact that land development with only residential subdivision and no accompanying industrial or commercial uses will be very expensive to service, and will generate minimal tax revenue.

In the case of the dormitory suburb the tax base is almost exclusively residential. As this type of village grows and its public service demands, particularly for schools, begins to balloon, the property tax bills of the residents may rise to an inordinate degree. This increase occurs because of the high unit cost of providing public services to a small scale settlement and more particularly is attributable to a dispersed, relatively low unit value type of real estate which requires, in volume, such an expensive service as public schooling. On the other hand observe the situation in the industrial suburb or satellite, which may have a single large factory within the boundaries of its rather small tax district. The chances are good that the property tax on its residences and even commercial uses may be minimal. In every sense of the word this is what we mean by the expression 'tax colony.' 13

The demand of rural residents for improved urban services constitutes a serious problem due to the expense factor, the need to escalate mill rates, and the ramification of increasing the tax payments for all residents in the rural-urban fringe area. In essence, rural residential migrants or non-farm inhabitants force original farm residents to subsidize their uneconomical service demands.

Among a number of potential effects, the basic presence of non-farm inhabitants in the rural-urban fringe area has

these prominent ramifications. For example, highways and local roads might experience increased traffic volume to the extent that they are incapable of accommodating the demand. Existing institutions such as schools may be unable to accommodate the influx of new residents. Finally, the utilization of the rural-urban fringe as a recreational hinterland by original residents may be frustrated if new residents have different leisure pursuits (e.g. non-motorized or passive activities in opposition with motorized or more gregarious activities).

Basically, the demand of rural residents for improved services represents a significant problem of the rural-urban fringe area due to the high costs of urban services. Realistically, urban services are not even economical in a large nucleated urban settlement due to the expensive costs of installation and maintenance. Consequently, it is rudimentary to understand the severe uneconomical circumstances that are inevitable when urban services are proposed for rural residential development sites.

5. Environmental Problems

A number of environmental problems become apparent in the rural-urban fringe area as a result of urban-to-rural invasion.

One of the most prominent problems is solid waste management. Existing landfill sites in the rural-urban fringe area are environmentally harmful for surrounding land uses due to methane accumulation. The following anecdote documents this situation.

Methane is an odourless, colourless, inflammable gas, a by-product generated by decaying garbage. This volatile gas has cost Winnipeg more than \$4 million in settlements after development was permitted on top of a former St. Boniface garbage site. ... Today, the city has 35 garbage dumps and no development is allowed to take place within 500 feet of any of them without city hall approval. Meanwhile, the city's board of commissioners thinks the building ban should extend to 1000 feet from a garbage site. 14

As cities grow and competition for land becomes more intensive in the rural-urban fringe area, the problem of solid waste management will become more significant as waste volume will increase, less waste will be bio-degradable, and suitable disposal sites will be difficult to locate.¹⁵

The use of septic disposal systems by rural residential inhabitants can be environmentally harmful under certain conditions. Proper or intended functioning of a septic system will depend upon the adequacy of the soil for absorption, the type of lot size in the overall development (at least one acre is suggested as the minimum land requirement for a septic system), and the type of surrounding land uses. Environmental problems will most likely occur if the density of rural residential development on a parcel of land is allowed to increase without restrictions. The following report illustrates this situation: a situation that seems inevitable due to constant demands for more rural residential subdivisions in rural-urban fringe areas.

Niverville - Elmer Wiebe stands in ankle-deep muck and stares at a cloud of mosquitoes hovering over pools of sewage in his backyard. ... Mr. Wiebe owns one of 27 houses on a pair of streets about a half mile from the main road of Niverville. But these residents don't share the village's modern sewage system, because they live in the Rural Municipality of Ritchot. The well-groomed

houses along Ritchot Drive and Church Street have septic tanks that pump sewage to a 'septic field' in the backyard. The sewage is supposed to drain away, but Mr. Wiebe says there are so many houses crowded into the area that the ground has become saturated. ... Other residents point glumly to dead trees and gardens where nothing will grow. 16

Finally, the rural-urban fringe area may have environmental problems such as water supply pollution or noise pollution as a result of non-compatible uses being juxtaposed to each other. For example, these problems can occur if rural residential development or recreational space is located adjacent to, or within proximity of, existing rural uses such as livestock operations, feed lots, mineral extraction sites, or heavy industrial plants.

6. Loss of Land For Mineral Extraction and Recreation Purposes

Depending upon the political environment of a particular metropolitan region, it is possible that parcels of land with mineral extraction or recreational value will be converted to other uses during the process of urban-to-rural invasion. The conversion of such valuable land represents a problem as mineral extraction sites and recreational terrain are scarce commodities in a metropolitan region.

Firstly, terrain with potential for public recreational development continues to decrease in rural-urban fringe areas as real estate agents or urban developers acquire such land for private lot exploitation. It is imperative that recreational space be preserved and protected, but Jackson's contention underscores the political realities of the situation.

Rural roads gradually become residential streets, even though the housing is intermittent, and the residential loop or cul-de-sac of a small subdivision is wholly urban in its character despite its rural setting. There are also important aesthetic aspects in the selection of sites, with wood lots, areas of picturesque landscape, sloping areas, the brows of hills, valley sides with views and lakeshores being chosen early in the land conversion process - hence there is frequently a cleavage between urban growth and the conservation of land for recreational purposes, with recreation being the loser because of the costs of land acquisition. 17

Secondly, it is primarily economics that dictates the necessity to preserve mineral extraction sites. Eliminating mineral extraction as a land use at a mineral deposits site forces construction and building trades to venture further distances from the built-up city to acquire their minerals. The extreme circumstance is a necessity to import minerals such as sand and gravel. As these latter alternatives are costly, it seems imperative to preserve parcels of land with mineral extraction potential.

C. Summary

Six prominent land use problems occur in the rural-urban fringe area of a metropolitan region. These problems emerged after the invasion of rural areas by urban-oriented uses and activities. To reiterate, these six problems are:

1. Irregular or non-contiguous land development of a "ribbon or leap-frog" nature.
2. The termination of productive agricultural activities and the ramifications of idle land and premature subdivisions.

3. The severance of large land holdings into small uneconomical parcels.
4. The expensive "urban service" demands of rural residential migrants or non-farm inhabitants.
5. Environmental concerns such as solid waste management, balanced rural residential development and accompanying septic system installations, and the potential incompatibility of certain urban land uses adjacent to existing rural land use.
6. The conversion of scarce recreational terrain and mineral extraction sites for other prioritized urban-oriented land uses.

It is these specific problems that require consideration and acknowledgement if the overall geographical space of a metropolitan region is to be planned in an economic and orderly manner.

D. Footnotes

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CHAPTER IV

A STRATEGY OF ORDERLY LAND USE PLANNING FOR A METROPOLITAN REGION

A. Introduction

The previous chapter described the various land use problems that occur in the rural-urban fringe area as a result of rural areas being invaded by urban-oriented land uses and activities.

The purpose of this chapter is to describe a strategy of orderly land use planning for a metropolitan region: a strategy that is designed or intended to prevent these land use problems from either recurring, or increasing in intensity. As dealt with in Chapter I, orderly land use planning of a metropolitan region is defined as the rational and logical coordination of potential and existing land uses or activities in the rural-urban fringe area. These land uses and activities are coordinated with the inevitable expansion demands of the built-up city area.

As well, orderly land use planning of a metropolitan region has these other general characteristics. A strategy of orderly land use planning for a metropolitan region attempts to compromise the land use demands of the two unique interests competing for control of the rural-urban fringe area: the expansion-oriented demands of the urban or built-up city residents, and the preservation-oriented preferences of the

original rural inhabitants.

Orderly land use planning of a metropolitan region is concerned with minimizing the potential of land use incompatibilities, and with promoting the utilization of existing land resources in a fashion that makes optimum use of their economic potential and locational advantages. This represents an approach that Coleman refers to as environmental planning.

Consequently, city-centred planning is beginning to give place to a more integrated approach, that of environmental planning, in which all types of environment are taken into account as being part of a single integrated system. 1

Finally, orderly land use planning features a prognosticative perspective, or concern for future growth.

The main focus of the regional plan is on a strategy for growth - a strategy for working out the direction, sequence and extent of development within and around the major urban centre of the region. ... The reason for this is that the plan is directed toward creating order and certainty in the broad pattern of development. 2

The paramount objective of this chapter is to describe the specific features of an orderly land use planning strategy for a metropolitan region. As a result of perusing numerous articles, studies, and reports, it is apparent that the following strategy is essentially representative of strategies that are proposed by Canadian regional planning authorities. Only the substantive inputs of the orderly land use planning strategy will be presented (i.e. there will be no consideration of jurisdictional mechanisms for implementing the substantive inputs of the strategy). Russwurm describes these two integral components of an orderly land use planning strategy (although he refers to a strategy as a policy).

Substantive policy is what things are to be done; jurisdictional policy is who is going to do it and how is it going to be done. A land use policy that works will link substantive and jurisdictional policy clearly. 3

B. A Strategy of Orderly Land Use Planning

For A Metropolitan Region

Therefore, orderly land use planning of a metropolitan region has the following sequential phases and specific statements of regional planning principles (refer to diagram of phases in Figure 3):

1. Identification of Existing Land Uses In The Rural-Urban Fringe Area That Require Protected Status

Eight specific or prominent land uses can be identified that merit protected status. By protected status, it is meant that the current use of the land should continue, or the natural feature of the land should be preserved and not converted. This designation of protected status is intended for three essential reasons: to ensure the continuity of profitable benefits from land being utilized for certain economic activities, to preserve the natural features of land for recreational and ecological purposes, and to isolate certain land uses that would create environmental problems if infringed upon by incompatible uses.

a. Agricultural Activities Utilizing Small Parcels of Land

Agricultural activities that utilize small parcels of land include such uses as dairying, orchards, nurseries, or market gardening. These particular activities require

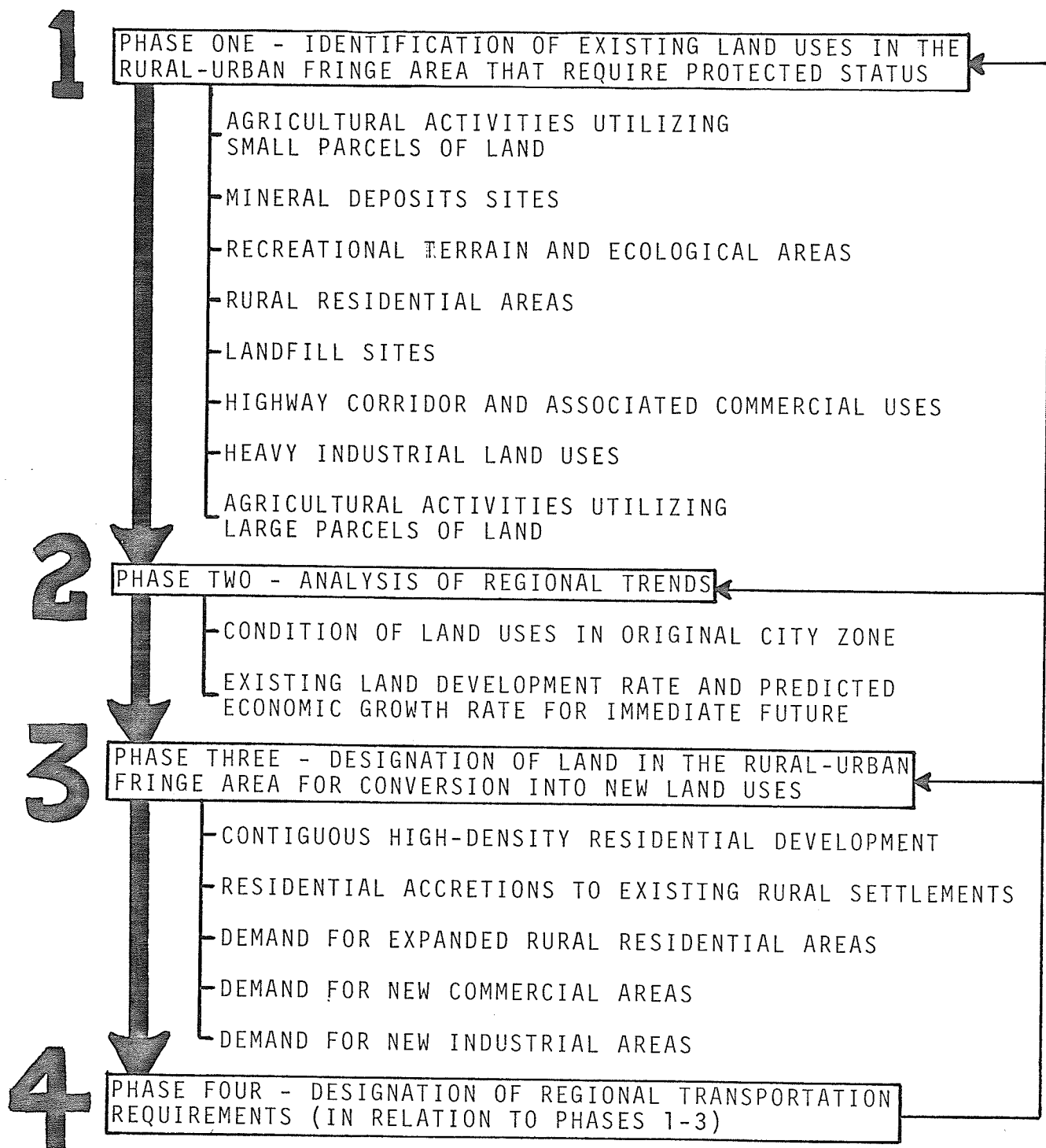


FIGURE 3 - PHASES OF ORDERLY LAND USE PLANNING STRATEGY FOR A METROPOLITAN REGION

protected status for a number of reasons. The prime reason is that the products of these agricultural activities are of a fragile and perishable nature, and can not be transported extensive distances without costs increasing significantly. Therefore, these activities require protection of their locations in the rural-urban fringe area that are proximate to the urban market.

Secondly, the acreage that is utilized for these activities requires protection due to the negative economic consequences that could arise if a substantial amount of productive acreage was converted for alternative purposes. As these activities are quite employment- and revenue-intensive, the reduction of finite acreage could create higher unemployment and lower local incomes. As well, the reduction could create a lower supply of locally-grown products which would necessitate importing these particular products. The consequence would be lower quality products at higher prices to the consumer. The reduction in productive acreage could have a recessive impact on secondary and tertiary activities associated with the primary agricultural activity. This scenario would involve more unemployment, lower incomes, and a negative "spin-off" effect on the economic base of settlements within the region.

Finally, these agricultural activities require protection or isolation from certain land uses that could locate elsewhere within the region. If these land uses were to locate within proximity, or adjacent to these agricultural activities, the environmental damage could be significant. For example, a

heavy industry could emit noxious pollutants that could destroy the fruit-bearing capabilities of trees in an orchard.

b. Mineral Deposits Sites

As indicated in Chapter III, a major problem of the rural-urban fringe area is the loss of land with mineral extraction potential when it is converted for other uses or activities. This conversion represents a problem because it forces agencies (such as building contractors or municipal road construction departments) to acquire their deposits by employing more expensive options such as importing, or developing sites that are not within easy reach of the built-up city.

There are two types of mineral deposits land that require protection: sites that are being exploited and resemble a heavy industrial land use, and sites with mineral deposits that remain in a natural geological state. It is necessary to isolate these landforms from a number of land uses such as rural residential development, sensitive agricultural activities, developed recreational areas, and high density residential expansion. In isolation, a mineral deposits site is quite innocuous; even if it is developed for extraction purposes. However, if these "sensitive" land uses locate adjacent to, or within proximity of a mineral deposits site, environmental impact can occur. The following excerpt endorses this situation.

Sand and gravel pits tend to be located near their markets. Frequently they develop without regard to alternative uses or environmental values. Too often they contribute to stream sedimentation, create traffic hazards, and mar the landscape when located immediately adjacent to highways without proper setback and visual barriers. When located adjacent to residential areas the problem is compounded by their contribution to noise, air and water pollution and thus creating nuisances and health hazards for the residents. 4

This excerpt reveals the environmental circumstances which become apparent whenever sensitive land uses are juxtaposed with mineral deposits sites. However, it is erroneous to state that "sand and gravel pits locate" alongside these specific sensitive land uses and cause disturbances. It is the reverse situation: these sensitive land uses locate by mineral deposits sites, and suffer environmental damage due to the nature of mineral extraction activities. Therefore, it is quite imperative to protect and isolate mineral deposits sites.

As well, the following anecdote unequivocally documents why a mineral deposits site requires protection from possible land conversion. (Statement issued by Mr. Warner Jorgenson: Chairman of Provincial Land Use Committee of Cabinet, Province of Manitoba)

As an example of the type of development which the new policies would prevent, Mr. Jorgenson cited the new residential subdivision in Bird's Hill, northeast of Winnipeg. The new homes were built on the best sand and gravel deposits available in the area for construction purposes, he said. A 10 year supply of aggregate sits under those homes. As a result of the new subdivision, contractors will have to look elsewhere for materials. The mistake could boost construction costs by \$100 million within a few years. 5

c. Recreational Terrain and Ecological Areas

Over the next few decades, the following trends will probably be apparent in metropolitan regions.

Initially, energy costs will increase exorbitantly and non-renewable resources will continue to be depleted in rapid fashion. As a consequence, travel to distant recreational sites will be reduced, and proximate recreational space within metropolitan regions will become valuable and in high demand

for private utilization.

Secondly, leisure time and disposable income will generally increase, and the result will be a higher demand by individuals for land in the rural-urban fringe area that facilitates a "recreational escape."

Finally, the rural-urban fringe area will continue to experience the intrusion of residential development and associated urban uses. The ramification will be additional private exploitation of natural terrain with recreation potential. As indicated in Chapter III, this type of private exploitation represents one of the major problems of the rural-urban fringe area. Based upon these assumptions, it is imperative that natural terrain with recreational potential be protected for public purposes.

The immediate requirement is to preserve land parcels in the rural-urban fringe area with these features: tree stands, diversified landforms (i.e. hills or undulating terrain), lakes, and watercourse corridors.

One approach to preserving recreational terrain has been the "greenbelt" method, but its efficacy is questionable. By demarcating a "legal moat" of raw land on the periphery of a built-up area; the costly "leap-frog" form of non-contiguous land development is encouraged beyond the "greenbelt." With respect to preserving recreational terrain, it only protects the existence of natural recreational areas within the "greenbelt" and not within the total rural-urban fringe area.

To protect this natural terrain that will be inevitably required, an extensive recreational space preservation program

seems more appropriate. The essential objective of the program would be to protect such terrain from private exploitation and incompatible land uses. Jackson emphasizes this requirement.

Future generations of Canadian citizens will certainly require very much more recreational space in, around and close to expanding cities than now exists - yet the best and most advantageous use of many sites is already to a large extent denied or thwarted by existing patterns of development and the failure of successive governments to pursue active policies of providing sufficient open space in these localities to meet foreseeable needs. As is being emphasized continually in this section, there is an urgent need for the formulation of a public open space program within the context and framework of wider urban-regional development policies. 6

The protection of sensitive ecological areas that provide a rare or unique habitat for plants and animals would be an integral component of this open space preservation program. This would be necessary as the intrusion of people and various land uses could create severe environmental disturbances.

d. Rural Residential Areas

Rural residential areas require isolated or protected status because of the negative effects that such development encourages. Rural residential development can be considered as the culprit for a number of the land use problems that were discussed in Chapter III.

As indicated in that chapter, rural residential subdivisions are usually "deficit" forms of land development: the tax revenue generated by these rural residential areas does not equate with the servicing costs. This is especially the case if inhabitants of the areas demand increased and diversified services. As well, rural residential land development has other negative consequences with respect to the land use problems of

the rural-urban fringe area.

Firstly, it infringes upon large agricultural holdings and escalates the land value/assessment of productive agricultural land. The eventual consequence is unrealistic property taxes, and the forced termination of agricultural activities. Secondly, the large lot characteristic of rural residential areas does not preserve the rural landscape; it represents a semi-urban form of land development that fragments productive land into private lots of wasted buffer space.

As a result of these land use problems that rural residential land development encourages, it is essential that any existing rural residential area be prevented from expanding. This objective can be achieved by designating rural residential areas with protected status. This protected status would restrict rural residential areas from increasing their density, as higher density development would probably cause septic system overload; and therefore, environmental problems such as soil contamination or groundwater pollution.

However, the protected status of rural residential areas is not totally designated on the basis of negative reasons. As a legitimate residential land use that deserves a protected "family" environment of tranquility and privacy; incompatible land uses such as heavy industry, transportation corridors, or livestock-feed lot operations should not locate adjacent to, or within proximity of a rural residential area.

e. Landfill Sites

Landfill or solid waste disposal sites require protected

status for a number of reasons.

Initially, their locations in the rural-urban fringe area require preservation. Landfill sites are intended to serve the majority of the metropolitan region population who reside in the built-up area. Landfill sites are required to be proximate to serve this population, but they can not locate in the built-up area due to the environmental hazards that would be inevitable. Consequently, landfill sites locate in the rural-urban fringe area: the area is proximate to its "market" in the built-up area, and it features ample buffer space to prevent environmental problems. As well, the transport costs associated with the disposal of solid wastes dictate that landfill sites be as close to the built-up area as possible.

Secondly, landfill sites and their surrounding buffer space require protected status from other land uses for the same reason that mineral deposits sites require protection. If isolated, landfill sites will be relatively innocuous. However, if juxtaposed with various land uses such as new high-density housing, rural residential sites, or similiar sensitive land uses; it is probable that negative environmental consequences will be endured by these particular sensitive uses. For example, as indicated in the Chapter III discussion on land use problems of the rural-urban fringe area, landfill sites can produce dangerous methane accumulation, or disturb the potability of water supplies. These contaminating or polluting effects of landfill sites do not remain stationary

and tend to disturb adjacent land parcels. Therefore, it is essential to protect landfill sites and their surrounding buffer space from encroachment by sensitive land uses.

Finally, as the population of a metropolitan region increases, the use of existing landfill sites will intensify. Landfill operations will probably be required to expand into their buffer space to accommodate the increased volume of waste. Therefore, the protected status of landfill sites and their surrounding buffer space is even more crucial for ensuring adequate solid waste management in a metropolitan region.

f. Highway Corridor and Associated Commercial Uses

Similar to rural residential subdivisions, highway corridor and associated commercial uses require special consideration due to their negative impact. Highway corridor and associated commercial uses should be prevented from expanding, so the following land use problems of the rural-urban fringe area will not be encouraged to re-occur, or intensify.

Firstly, similar to rural residential development, "strip" commercial uses or highway activities encroach upon productive agricultural land and increase the land value/assessment. As emphasized previously, the outcome is higher property taxes and the forced termination of productive agricultural activities.

Secondly, this form of commercial development deteriorates the aesthetic features of the rural landscape, and encourages associated types of development that have a comparable impact.

Thirdly, these commercial uses interfere and essentially destroy the primary design characteristics and functions of highway corridors (i.e. high speed, non-stop, and a link between settlements). As well, these uses generate increased traffic volume, additional safety problems, and a necessity to allocate public revenues for the restoration of a highway corridor's original function.

Finally, these "strip" commercial uses are premature enterprises that capitalize upon users of the highway corridor. As a result of being approved prematurely, they represent non-conforming uses when contiguous or planned development eventually occurs near the highway corridor.

g. Heavy Industrial Land Uses

Heavy industrial land uses are extremely similar to landfill sites with respect to their required location in the rural-urban fringe area. It is this necessity that justifies a designation for protected status.

Heavy industries locate in the rural-urban fringe area due to the nature of their activities. These activities would create severe environmental and safety hazards if located in the built-up area. For example, heavy industries generate nuisances such as noise, odours, smoke, and dust. In addition, to these pollutants, heavy industry will always be a dangerous fire hazard. Heavy industries locate in the rural-urban fringe area to take advantage of the available vacant land for horizontal development, less restrictions for waste disposal, and attractive access to transportation systems. As well, heavy industries require their locations in the rural-urban

fringe area for proximity to the labour market of the built-up area.

Furthermore, existing heavy industrial areas require protected status so they will not be encroached upon by sensitive land uses. Similiar to the situations of landfill areas and mineral deposits sites, heavy industrial areas will only create significant environmental problems if sensitive land uses such as residential development are permitted to locate on adjoining sites.

h. Agricultural Activities Utilizing Large Parcels of Land

As indicated in Chapter III, the following land use problems are quite prominent in the rural-urban fringe area: "leap-frog" or non-contiguous land development, idle or vacant land as a result of the termination of productive agricultural activities, and the fragmentation of the rural-urban fringe area into small or uneconomical land parcels. These problems are encouraged because agricultural operations that utilize large parcels of land are not protected.

Agricultural activities that require large parcels of land are of two prominent types. Firstly, certain crops will only reap adequate profits if the volume of production is high. To acquire a high volume of production, large parcels of land must be available. As well, the large parcels are required for the contingency of expansion. Expansion may be necessary to meet a higher crop demand, or to increase volume of production if prices decline. Secondly, certain livestock agricultural activities require large parcels of land for grazing, and to prevent environmental problems with adjacent

land parcels.

In addition to preventing the previously mentioned land use problems from recurring, or increasing in intensity; agricultural activities that utilize large land parcels are required for other economic reasons. These activities may be significant contributors to the region's economic base, and any termination of their productivity may create higher unemployment and lower revenues. Protecting the economic viability of these agricultural activities can only be guaranteed by discouraging fragmentation of the large land holdings that facilitate their operations. This type of land tenure has other advantages.

By discouraging land use changes and by maintaining large continuous blocks of agricultural lands, the community will tend to stabilize values and restrain the inflationary pressures on land. A reduction in speculative interest will encourage the continued use of these lands for agricultural endeavours and thereby advance the community toward its goal of preserving viable farm lands. 7

As Phase Three of this strategy will disclose, these large holdings of raw land in the rural-urban fringe area are required for another important factor. (i.e. conversion into other land uses of higher economic priority within the metropolitan region). These lands should be accorded designated status so as to facilitate not only a degree of control over the amount of land that is converted; but also, the particular type of land to be converted. As previously indicated, the agricultural use of these large holdings of land does generate economic opportunities that maintains the strength of the regional economic base. Therefore, as lands

are converted and agricultural activities terminate, it would be necessary to monitor and assess the impact on the regional economy. If the consequences are too severe for the region, this policy of converting raw land would have to be re-considered.

Moreover, if raw land is to be converted, these new uses should be directed to land that is marginal for agricultural productivity.

Phase One of this strategy of orderly land use planning for a metropolitan region has identified eight distinct land uses or natural landforms that require protected status. The primary intention of the protected status phase is to facilitate control over the land use problems of the rural-urban fringe area; and prevent them from recurring, or increasing in intensity. Of these eight land uses, only large holdings of raw land are considered as susceptible to conversion for other uses: the conversion of large holdings of raw land may be necessitated by the intrusion of other land uses that have economic priority within the metropolitan region. Before these potential "intruding" uses are discussed in Phase Three, it is important to consider the amount of raw land that should be designated.

2. Analysis of Regional Trends

The objective of Phase Two in this land use planning strategy is to consider the amount of raw land that should be designated for conversion. This objective is completed by an analysis of two trends in the metropolitan region: the condition of land uses in the original city zone of the

built-up area, and secondly, the existing land development rate for the immediate future.

a. Condition of Land Uses In The Original City Zone

The condition of land uses in the original city zone of the built-up area represents an important consideration with respect to designating quantities of raw land in the rural-urban fringe area for conversion to "intruding" urban uses.

For example, if urban "blight" has increased the amount of vacant land in the original city zone, and municipal infrastructure is still adequate, the potential for "in-fill" development would seem feasible. Assuming a low housing demand situation, the re-development of vacant land in the original city zone would reduce the quantity of land to be designated for conversion in the rural-urban fringe area. However, if the amount of vacant land in the original city zone is minimal or too dispersed to facilitate assembly, it may be necessary to designate an above-average quantity of land in the rural-urban fringe area for conversion purposes.

b. Existing Land Development Rate and Predicted Economic Growth Rate For The Immediate Future

If existing land development rates are stable or declining, and the accompanying predicted economical growth rate is recessive, it may be preferable to designate a below average quantity of land in the rural-urban fringe area for future urban purposes. However, if existing land development rates are high and increasing, and the accompanying predicted economical growth rate is optimistic, it should be mandatory to designate an above-average quantity of raw land in the

rural-urban fringe area for conversion purposes.

For any metropolitan region, these trends will be different. As a result, the quantity of raw land that will be designated for conversion will vary for each metropolitan region. As well, the amount of raw land that will be designated will depend upon the number of new "intruding" land uses that are to be allowed, and secondly, the specific land requirements of these various uses.

3. Designation of Land In The Rural-Urban Fringe

Area For Conversion Into New Land Uses

The objective of Phase Three in this land use planning strategy is to outline the various land uses that have the potential for locating in the rural-urban fringe area; and secondly, to discuss the overall advantages and disadvantages of each potential land use.

As a result of reviewing numerous articles and documents that discuss the rural-urban fringe area, five prominent land uses can be identified for possible conversion of raw land: contiguous high-density residential development, residential accretions to existing rural settlements, rural residential subdivisions, commercial uses, and industrial uses.

a. Contiguous High-Density Residential Development

Contiguous high-density residential development involves the subdividing of raw land into "R1" lots of approximately 60x120 feet to provide a density much higher than rural residential development. The following excerpt adequately justifies the conversion of raw land for the intruding land use of contiguous high-density residential development.

The adding of considerable numbers of people to our cities means converting agricultural and other land for dwelling units and all the infrastructure which goes with our modern cities. Even though the amount of land used per person declines as cities grow larger through filling-in, building-up, and building down, such intensification accommodates only limited numbers of additional people. Most housing for the added population takes place as continuous accretions to the existing built-up area of our cities. 8

In addition, housing developments of this nature stimulate local job-creation and incomes to a degree unmatched by lower-density developments.

The designating of particular locales in the rural-urban fringe area for eventual high-density residential development depends upon a number of factors. The first factor is that development should be a contiguous addition to ensure that the costs of infrastructure installations are as low as possible. Secondly, certain parcels of raw land will be more appropriate for developing if located within the operating zone of public services facilities (e.g. civic garages, recreational centres, libraries or cultural halls, educational institutions, fire halls, and police stations). If raw land is accessible to these municipal facilities, the eventual residential subdivision would not require its own facilities. This advantage reduces a municipality's capital construction budget immensely. Thirdly, high-density residential development suffers environmental problems when located adjacent to such land uses as mineral deposits sites, landfill sites, heavy industrial areas; and to an extent, highway corridor commercial uses. As these landforms or uses are a part of the rural landscape, raw land that is not within proximity of any of these landforms

or uses would be advantageous for high-density residential development.

Finally, certain parcels of raw land will be more advantageous than others if the surface drainage is adequate; and secondly, if the water supply is extensive in volume and not susceptible to contamination.

Parcels of raw land that meet these requirements merit designation as potential high-density residential development areas. Staging of these potential development areas would be on a priority system. Highest priority would be delegated to those areas having the most advantages as outlined in the requirements for designation.

The initial procedure in implementing this designation-priority system of converting raw land for high-density residential development would be the installation of infrastructure or public services. "Servicing" of raw land provides municipalities with an instrument for directing growth patterns.

Moreover, provision of major services like water and sewage can be used to direct urban growth, especially if municipal regulations require such services for householders. Such persuasive channelling of growth can be accomplished by insisting that new expansion take place only in fully serviced areas; and then providing such service only in the areas where urban expansion is desired. 9

The essential consideration of "servicing" is how much of the designated raw land should be provided with infrastructure. As the following excerpt will indicate, the supply of serviced land for high-density residential development should not be reserved for the decisions of a

few suppliers which would result in high land prices and the continuity of land speculation. The supply of serviced raw land should be more competitive in nature.

If servicing can be extended to a sufficient number of areas to produce competition among developers in a number of different parts of the city, then prices will stabilize, profits will be reasonable, and the need for a new tax will be eliminated. ... If more land was serviced more quickly, there would be a greater assurance that the supply of lots would be sufficient to meet demand. With the expectation of a stable supply-demand situation, land speculation would be reduced, and that would benefit both the developer and his ultimate consumer, the homebuyer. 10

b. Residential Accretions To Existing Rural Settlements

Within a metropolitan region, rural settlements still survive in the rural-urban fringe area. A rural settlement features a peripheral zone of raw land. A potential land use for this raw land zone is a contiguous residential accretion of similar nature to the land use of high-density residential development discussed in the previous section. The approval of this type of land use represents the initial phase in the conversion of a settlement's function from a rural service centre to a dormitory suburb of commuting residents. The designation of raw land for conversion to residential accretions on the periphery of rural settlements seems justified on the basis of the following reasons.

The first reason is that demand for residential locales in the rural-urban fringe areas is well-documented. This demand is usually satisfied by the approval of rural residential subdivisions with large lots. The costly nature of rural residential development has been discussed. To satisfy this demand, accretions to existing rural settlements maybe a more

advantageous alternative than rural residential development, as the costs of servicing would be significantly lower.

Secondly, rural residential development is notorious for reducing the rural landscape into small, uneconomical land parcels. By directing this demand for residential development in the rural-urban fringe area to raw land surrounding rural settlements, fragmentation of raw land between the built-up area and the various rural settlements would not be as extensive. The consequence would be a continued existence of large land holdings and productive agricultural utilization of the land.

Thirdly, this form of residential development would generate revenues, and provide an economic function for settlements that are no longer viable as agricultural service centres. Jackson refers to this approach as the "new-town" concept.

The new-town concept is one whereby the maximum portion of outward growth is encouraged to occur in self-sufficient and self-contained areas away from the initiating city, and separated from its urbanized area by a distinct and continuous zone. 11

In designating the peripheral raw land of rural settlements for residential development, a number of preliminary aspects require consideration before certain settlements receive priority designation.

Initially, the development philosophy or preference of each settlement should be assessed. For example, certain settlements may regard such residential development as intrusive, and would prefer to preserve the rural character of their settlement.

Secondly, some settlements may not be capable of accommodating residential accretions due to the inadequacy of existing services. Consequently, only settlements with adequate services would be capable of accommodating residential accretions.

Finally, a settlement with the advantages of political commitment to residential accretions, and adequate existing services; would not be guaranteed a priority designation for conversion of its peripheral raw land. The priority designation would only be allocated if the raw land has the particular advantages described in part a. of this phase. To reiterate, the most advantageous raw land surrounding a rural settlement would have these features: most proximate to existing municipal services and facilities, most distant from incompatible or environmentally harmful land uses, and most appropriate for drainage and volume of water supply.

c. Rural Residential Subdivisions

As advocated in Phase One of this land use planning strategy, existing rural residential areas should not be expanded due to a number of negative reasons. Accordingly, it is questionable if any raw land in the rural-urban fringe area should be converted into new rural residential subdivisions. Any new rural residential subdivisions would only continue to intensify the problems created by existing rural residential areas.

New rural residential development would further fragment the rural-urban fringe area into small, uneconomical parcels with the consequence being decreased agricultural productivity.

It would increase the financial burden of existing residents in two ways: on the one hand, residents would be subsidizing the higher expenses associated with servicing rural residential areas; and on the other hand, residents would pay higher taxes to offset the costs of new "urban services" demanded by rural residential inhabitants.

As a result, this strategy of orderly land use planning does not recommend the conversion of raw land for new rural residential subdivisions. The large lot feature is very undesirable and only serves to carve productive raw land into small parcels of wasted buffer space.

If raw land is to be considered for conversion into rural residential subdivisions, it would only seem possible under the following conditions. First, the raw land should be marginal with respect to agriculture, forestry, or other resource-based activities. Coinciding with this marginal economic development feature, the land should be unattractive or not functional for use as recreational terrain. Secondly, the large lot feature would have to be disregarded in favour of smaller lots.

What is needed if the right to country residences continues to be accepted is designated areas mostly for cluster development, mostly of small lot sizes but with variable lot sizes as a possibility. 12

Smaller lots would preserve more raw land for other purposes and waste less space. However, these conditions of marginal land and smaller lots present a significant dilemma. Marginal land may have features such as poor drainage, high water tables, and soil absorption limitations. As a result,

the septic system of disposal that usually is a component of rural residences would not function properly. As well, the high density associated with smaller lots would create environmental problems if septic units were utilized.

Consequently, the alternative of conventional servicing would have to be considered. This alternative would be expensive, and should not be subsidized by original residents. If this servicing method was considered, the developers or property owners should expend the necessary capital to offset the increased costs of servicing such a form of residential development.

Overall, these conditions are extremely restrictive. However, the intention of this land use planning strategy is to emphasize that new rural residential development should only be ratified under such conditions. Basically, rural residential areas have minimal economic benefits, and represent a severe land use planning problem. Their disadvantages more than outweigh any advantages, and accordingly; the conversion of raw land for rural residential subdivisions is only recommended with certain stipulations.

d. New Commercial Uses

As advocated in Phase One of this land use planning strategy, existing highway corridor or "strip" commercial areas should not be expanded due to a number of negative reasons. Accordingly, raw land in the rural-urban fringe area should not be converted for new "strip" commercial uses, as their intervention would only intensify the problems being

by existing uses. Any new commercial use would only serve to further fragment raw land and reduce agricultural productivity, further deteriorate the aesthetic features of rural areas, necessitate more expenditures to restore former functions of highway corridors, and increase the number of non-conforming land uses to contend with in the future.

Regardless of the minimal economic benefits that might be apparent after allowing new "strip" commercial uses, this strategy recommends that designation of raw land for conversion to such uses would be an erroneous decision.

However, this strategy does recommend the designation of raw land for conversion if the new commercial use is a required shopping centre. Shopping centres increase regional land revenues and create employment opportunities. The particular parcel of raw land that would be designated for new shopping centres should possess these features if conversion is to be approved. Similiar to high-density residential development; the raw land should be contiguous to the built-up area, proximate to municipal servicing and facilities, as distant as possible from incompatible or environmentally harmful uses, and adequate with respect to surface drainage and volume of water supply.

e. New Industrial Uses

This land use planning strategy considers the designation of raw land for conversion to new industrial uses as a necessity for maintaining the economic health of a metropolitan region. Industries are very tax-intensive and provide property

revenues above the costs of servicing. As well, industries provide primary employment opportunities which have "spin-off" or "multiplier" effects in the form of secondary and tertiary employment opportunities.

In assessing raw land for new industrial uses, the essential concern is to designate areas that will not be infringed upon by sensitive land uses such as residential development. As well, the designated location must be a compromise between: a safe distance from the built-up area due to the potential hazards of industrial activities, and secondly, proximate to the built-up area for convenience of the commuting labour supply.

Phase Three of this land use planning strategy has considered five prominent land uses as potential new uses of raw land in the rural-urban fringe area. As this discussion has outlined, the conversion of raw land can only be completely justified for new high-density residential development, residential accretions to existing rural settlements, new industrial uses, and for the shopping centre type of commercial land use.

4. Designation of Regional Transportation Requirements

The designation of regional transportation requirements represents the final phase of this strategy of orderly land use planning for a metropolitan region. Transportation requirements are designated to link the existing and proposed land uses of the rural-urban fringe area with the built-up area. Jackson corroborates this aim by stating that,

... the transportation and land use planning processes must be integrated to ensure that the effects of one plan do not destroy or remove the economic possibility of proceeding with the other. They should be complementary. The entire urban area and its immediate area of influence should be the basis for transportation and land use planning. 13

This phase has two specific objectives. The initial objective is to assess the adequacy and capability of the existing regional transportation system with respect to accommodating the demands of the existing "protected status" uses described in Phase One. In accordance with the regional trends analyzed in Phase Two, the second objective is to determine if the existing regional transportation system would be capable of accommodating the new land uses designated in Phase Three.

If the existing system was determined to be inadequate as a result of the anticipated requirements of the new land uses, the final component of this phase would be the proposed design and designation of future regional transportation requirements. In designating future regional transportation requirements, specific considerations would include:

- The type of accessibility to major roads or thoroughfares that is required by each particular new land use.
- The type of specific road functions, such as main arterials or local collectors, that are required within the designated area being converted to a new land use.
- The volume of traffic being generated by each new land use.
- The type of traffic being generated by each new land use.
- The different origin-destination patterns that would become apparent within the metropolitan region as a result of the

new land use.

Overall, designating regional transportation requirements is imperative to ensure that the existing and proposed land uses of the rural-urban fringe area are coordinated in a comprehensive manner within the built-up area.

C. Summary

This chapter has featured a strategy of orderly land use planning for a metropolitan region that is conceptually designed to achieve two objectives. The first objective of this strategy is to confront the various land use problems that occur in the rural-urban fringe area. The intention is to prevent them from recurring, or increasing in intensity. The second objective of this strategy is to rationally and logically coordinate the potential and existing land uses of the rural-urban fringe area. These land uses are coordinated in conjunction with the inevitable expansion demands of the built-up area.

This land use planning strategy involves four integrated phases that are designed to meet these two primary objectives.

The first phase involves the designation of eight prominent land uses or natural landforms of the rural-urban fringe area with protected status. The status is designated to ensure the continuity of the land use, or the preservation of the landform in its natural state. For either economic necessity or a requirement of environmental isolation, the following eight uses have been identified for protected status:

agricultural activities utilizing small parcels of land, mineral deposits sites, recreational terrain and ecological areas, landfill sites, highway corridor and associated commercial uses, heavy industrial uses, and large parcels of raw land utilized for agricultural activities. This phase identifies large parcels of raw land as requiring protected status because of the necessity to have reserves of raw land for conversion into other prioritized land uses.

The second phase of this strategy is concerned with considering the overall amount of raw land that is required for conversion purposes. This is completed by an analysis of two trends in a metropolitan region: the condition of land uses in the original city zone of the built-up area, and secondly, the existing land development rate and predicted economic growth rate for the immediate future.

The third phase of this strategy features a description of five prominent land uses that have the potential for locating in the rural-urban fringe area. Of these five uses, this strategy does not recommend that rural residential subdivisions and "strip" commercial uses be designated for conversion of raw land. This strategy does recommend the conversion of raw land for these new land uses: contiguous high-density residential development, residential accretions to existing rural settlements, shopping centre commercial uses, and industrial uses.

The fourth and final phase of this strategy involves the objective of providing a regional transportation network that links the existing and proposed land uses of the rural-urban fringe area with the built-up area.

D. Footnotes

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3. Lorne H. Russwurm, The Surroundings of Our Cities: Problems and Planning Implications of Urban Fringe Landscapes (Ottawa: The Community Planning Press, April, 1977) p. 83.
4. Department of Municipal Affairs, "Rural Municipality of Springfield Development Plan - Part 1 Background Studies" (Winnipeg: Queen's Printer of Manitoba, 1973) p. 17.
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6. John N. Jackson, The Canadian City Space Form Quality (Toronto: McGraw-Hill Ryerson Limited, 1973) p. 209.
7. Department of Environmental Planning - "City of Winnipeg, "West St. Paul Community Plan Information Report No. 2 - Community Planning Options" (Winnipeg: October 1, 1978) p. 17.
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12. Russwurm (1977), op.cit., p. 59.
13. Jackson, op.cit., p. 149.

CHAPTER V

A DISCUSSION OF THE MULTI-MUNICIPAL STRATEGY OF ADMINISTERING METROPOLITAN REGIONS

A. Introduction

The previous chapter featured the substantive inputs of an orderly land use planning strategy for metropolitan regions: a strategy which conforms with the type of strategies that Canadian regional planning authorities are attempting to implement, without success, within their respective metropolitan regions. As Rowat discloses, failure to establish such a strategy has been due to one paramount factor.

Despite their best efforts, planners everywhere have failed to see their plans implemented precisely where they were needed most - in the largest of our rapidly growing concentrations. Why has this been so? It is the contention of this article that the major reason is that in none of the great urban concentrations of the western world has there been a unit of local government which has corresponded with the urban or built-up area.¹

Due to an inappropriate jurisdictional policy, planners have not been capable of implementing the substantive inputs of their regional strategies. As indicated in Chapter I, Canadian metropolitan regions utilize regional planning structures that attempt to intervene with substantive land use policies; but encounter frustration and failure because the region maintains a jurisdictional policy of multi-municipal administration (i.e. a policy of administering metropolitan regions with a multiplicity of municipal governments that have separate

official plans and divergent development philosophies).

Plunkett and George document this situation.

While the provision of certain services within the fragmented jurisdictions of major urban and metropolitan areas proved difficult the planning and control of development of the entire area proved impossible. Even when area plans could be developed there did not exist any institutional machinery to secure their implementation. These and other inadequacies in terms of service provision and the securing of effective planning and development control became particularly acute in major urban and metropolitan communities which were economically and socially interdependent but were fragmented in terms of political jurisdictions. 2

The purpose of this chapter is to discuss the multi-municipal strategy of administering metropolitan regions by indicating how it prevents the implementation of an orderly land use planning process within a metropolitan region. As indicated in Chapter I, a number of regional planning structures have been instituted in Canadian metropolitan regions. However, since planning power remains vested in the local municipalities that politically fragment metropolitan regions, their success has been relatively minimal. This lack of success will be documented by examining four prominent regional planning structures that have been established in these Canadian metropolitan regions: the Regional Planning Commission (Province of Alberta), the Unicity-Additional Zone mechanism (City of Winnipeg), and the two-tier Regional Municipality approach in Hamilton-Wentworth and Ottawa-Carleton (Province of Ontario).

B. The Multi-Municipal Strategy of Administering Metropolitan Regions

This situation of multi-municipal administration remains entrenched in Canadian metropolitan regions for parochial political reasons. The following excerpt reveals the various reasons that local municipalities promulgate as rationale for their preservation.

Amalgamation often causes widespread and deepseated resistance. While this opposition, may, in part, reflect the self-interest of elected officials and bureaucrats, inconvenience to citizens or the natural inclination of people to avoid major change, many of the reasons for resistance are related to the fear of negative consequences to local autonomy, the special character and interests of the smaller communities and the potential for participation. 3

Regardless of the justifying factors for maintaining these local municipalities, their preservation ensures the continuity of jurisdictional fragmentation within metropolitan regions. As the following section will outline, this situation of jurisdictional fragmentation has prevented the implementation of orderly land use planning within metropolitan regions (and therefore, has encouraged the continuity of the land use problems that occur in the rural-urban fringe area).

Initially, it may be of some benefit to discuss how multi-municipal administration encourages the continuity of some particular land use problems of the rural-urban fringe area. Multi-municipal administration of a metropolitan region encourages the continuity of rural-urban fringe land use problems in a number of ways. From the outset, non-contiguous or irregular development occurs as a result of municipalities (in the rural-urban fringe area) imposing varying land regulations and controls. As well, this lack of unified planning control contributes to the development of the rural-urban fringe area in a haphazard

and amorphous fashion.

Public regulation contributes to sprawl by imbalancing the attractiveness of competing areas. For example, differences in land use controls inside and outside of corporate limits make the lesser controlled area more attractive. ... If the standards of building and land use within the controlled area are greatly more stringent than common practices in the building industry, the standards themselves may impel the development of housing units outside the controlled area and thus contribute to sprawl. 4

In their zeal for increasing revenues, some municipalities dispense with the utilization of planning regulations. This type of decision-making has the effect of making productive agricultural land quite susceptible to urban conversion. In his analysis of the Quebec City region, Fillion confirms this particular aspect.

Unfortunately the majority of the municipalities within the region have not taken any steps towards preserving good agricultural land from unplanned exploitation, the reason being that they are either too small and don't care or because they are too anxious to welcome developers who will indirectly increase their tax roles, and thus refuse to impose planning restrictions which will scare the developer off thereby sending him and his investment money elsewhere probably a few miles away. 5

Some municipalities utilize their power of zoning in an extremely frivolous manner that promotes existing environmental problems, or creates additional deleterious land use incompatibilities. For example, a municipality may re-zone land for high density rural residential development that could eventually cause groundwater pollution. This type of pollution has no regard for superimposed political boundaries and could contaminate aquifers in municipalities that abut on to the municipality with the rural residential development. This type of situation is quite feasible for other re-zoning purposes,

such as new industrial sites that could create inter-municipal air or watercourse pollution. Also, some municipalities can utilize their zoning power to create inter-municipal environmental problems of the following nature:

" There is, in fact, a pronounced tendency for less desirable facilities like municipal dumps and sewage plants to be sited in isolated locations directly on some other community's boundary. "6

Finally, the most significant aspect of multi-municipal administration that encourages the continuity of land use problems in the rural-urban fringe area is the inter-municipal competition for revenue-intensive development. This parochial competition for development creates problems such as premature subdivisions, a surplus of developed land, duplication and proliferation of ancillary land uses such as landfill sites, severance of land parcels into uneconomical parcels, the utilization of "regionally strategic" land for development purposes, and generally, transformation of the rural-urban fringe area into an amorphous land tenure pattern.

With respect to implementing an orderly land use planning process to confront these problems, and to promote logical coordination of existing and potential land uses in the rural-urban fringe area, multi-municipal administration acts as a barricade in a number of ways.

For instance, multi-municipal administration guarantees that planning power is vested in the local municipalities that fragment the metropolitan region. As a consequence, a variety of unassimilated and parochial official plans are ratified within the metropolitan region. Since these plans are precise

policies for each local municipality, there is no consideration of the principles prioritized in the metropolitan strategy.

Multi-municipal administration encourages the prospect of "snob" zoning on the part of certain municipalities. Although American in context, Thomlinson describes "snob" zoning. "Wealthy suburbs sometimes capitalize on their separate incorporation to adopt zoning ordinances preserving their aloofness and exclusiveness...".⁷ "Snob" zoning interferes in the orderly land use planning of metropolitan regions because it protects and isolates locales that may be required for prioritized regional land uses or facilities. Levin offers a comment on this particular aspect.

And there are recurrent problems in metropolitan planning involved in reconciling the divergent interests of different jurisdictions to locate major regional facilities (no one wants jails, public housing, airports, or incinerators). ... A further problem is at least as serious. This is the cumulative impact of local autonomy on regional land use patterns. The lack of an adequate supply of suburban apartments, and of housing for low- and middle-income families in the suburbs of virtually all metropolitan areas attests to the fact that a mosaic of individual community land use decisions can add up to a pattern of regional discrimination.⁸

Finally, multi-municipal administration encourages individual municipalities to engage in fiscal zoning, which is the approval of a zoning category that represents the highest possible economical land use; and therefore, the highest possible tax revenue that can be accrued from the land. The undesirable characteristic of fiscal zoning is that the prioritized zoning category is ratified regardless of the existing zoning category. Russwurm outlines the rationale behind fiscal zoning.

Fiscal zoning results as municipalities compete for development. Municipal governments, because they raise much of their income from property taxes, are under powerful inducement to develop everything in sight regardless of the consequences. 9

The intention of fiscal zoning is to attract lucrative industries, but the intense competition among municipalities for such industry leads to very haphazard and illogical growth. Orderly land use planning of the region is relegated to the "side-lines as the municipalities play their industrial attraction game on the metropolitan region field."

Industry, though consuming less land than do residential uses, is nevertheless a prime generator of further growth. As it is valued by rural communities primarily for its employment capacity and its tax dollar, location, at least for certain activities, has been as haphazard as for residential development. Each municipality seeks to expand and grow, even if industry pre-empts land more suitable for some other purpose. We are back to the medieval wall, this time with tax values accruing to each municipality and obviating the chance of a rational land use plan. 10

Fiscal zoning, and the competition among municipalities for development, interferes with orderly land use planning by haphazardly infiltrating land parcels that have strategic value as potential regional-oriented land use or facility sites. Furthermore, in their parochial quest to acquire industries, local municipalities will conveniently ignore the necessity of planning for ancillary land uses to supplement the primary development.

This section has outlined the general detrimental effects that multi-municipal administration has within metropolitan regions. The following section will feature a specific discussion of these effects by examining four Canadian regional planning structures that have demonstrated a lack of overall

planning efficacy as a result of multi-municipal administration.

C. Case Studies of Canadian Regional Planning Structures

1. Regional Planning Commission (Province of Alberta)

The Regional Planning Commission approach was instituted by the Provincial Government of Alberta in 1950. This thesis will examine the Calgary Regional Planning Commission (hereafter to be referred to as CRPC) to illustrate the lack of success that the "regional planning commission" mechanism has demonstrated in a metropolitan region situation.

The Calgary Regional Planning Commission was formed about 1951 when it was known as the Calgary District Planning Commission and was associated with the City of Calgary Planning Department. In 1958 its name changed to the present form and it became independent of the City operation. Presently, the Commission area is about 8000 square miles. It takes in 5 rural municipalities and the 28 urban municipalities, including Calgary, contained within that area. 11

(Refer to Figure 4 for illustration of land jurisdiction of CRPC.)¹² According to a document prepared by the CRPC, the regional population was approximately 475,000 in 1975, and is estimated to be 550,000 by 1981.¹³

The political or representative foundation of the CRPC is multi-municipal.

The Commission members are elected representatives of 18 of the 33 municipalities. Generally, the 18 come from the larger municipalities in terms of population. Smaller ones are represented on the Commission in many cases by the member from the surrounding municipality. 14

The CRPC is not representative of the regional population because the City of Calgary has only three of the eighteen

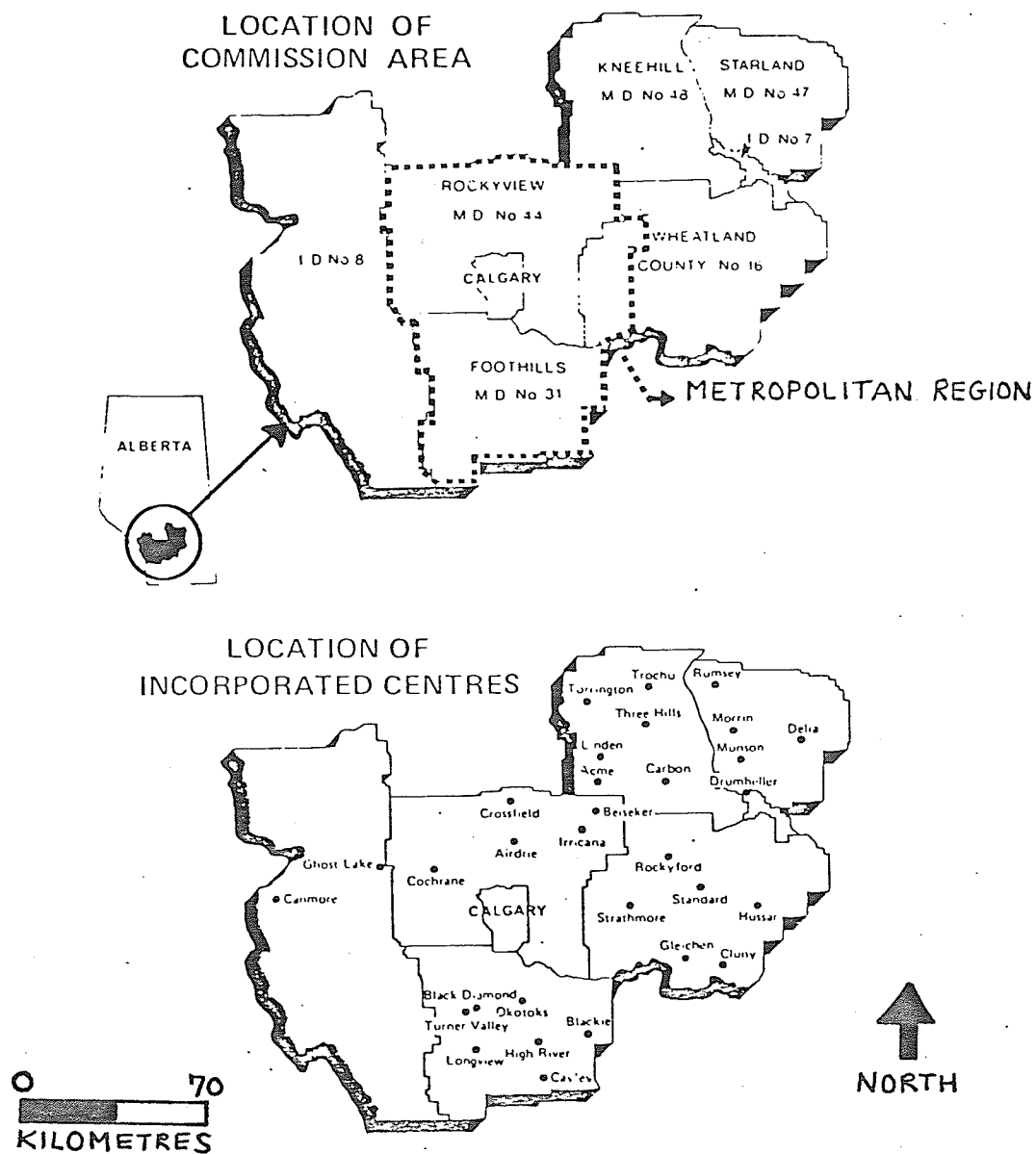


FIGURE 4 - LAND JURISDICTION OF CALGARY
REGIONAL PLANNING COMMISSION

CRPC positions, and at least 90% of the region's population.

The CRPC has the following statutory powers and objectives:

The Commission is the subdivision approving authority for its area, except for the City of Calgary, and is also responsible under The Planning Act for the preparation of a Regional Plan. Its other powers are advisory, and the Commission assists municipalities in the preparation of general plans, land use by-laws, and with other planning work. 15

With respect to implementing orderly land use planning within its metropolitan region, the CRPC has not been that successful. The continuity of various land use problems in the rural-urban fringe area of the Calgary metropolitan region is symbolic of the lack of efficacy that the CRPC has demonstrated with respect to achieving orderly land use planning.

Firstly, rural residential development within the region has been responsible for encouraging the continuity of a number of problems.

In recent years, the demand for country residential development in the Calgary area has been steadily increasing. Since 1969, approval has been granted for an average of 400 parcels per year (under 45 acres) which consume an average of 8,000 acres of land per year. ...Perhaps the most significant consequence of rural residential growth is the consumption of land. At the present time, 47,000 acres are taken up in parcels under 24.4 acres in size, and 36,000 acres in parcels between 24.4 and 44.4 acres in size. 16

Quality agricultural land (Classes 1,2, and 3) has been consumed by urban intrusions such as industry but the primary culprit within the metropolitan region has been rural residential development.

Until recently, little has been done to encourage development on lower quality lands and, for example, over seventy percent of country residential development has occurred on Classes 1, 2 and 3 agricultural land. 17

Accompanying this consumption has been the fragmentation of the rural areas into parcels of land that are quite uneconomical for agricultural production. As Figure 5 tends to exhibit, rural residential development has fragmented the region into an amorphous and haphazard land tenure pattern.¹⁸ The significant disadvantage of this fragmented land pattern is that orderly growth and development of the region will be difficult and complicated.

As well, the influx of rural residential development has meant increased service requirements; and the concomitant effect of higher tax rates for property owners, and increased municipal deficits. The economic provision of services such as transportation, education, and various public social requirements has been difficult due to the prominent "medium density" nature of much of the rural residential development.

As the continuity or intensification of these problems would indicate, an efficacious orderly land use planning process has not been implemented by the CRPC in the Calgary metropolitan region. The primary factor for this situation within this region is the lack of statutory clout or power that is provided to the CRPC. The regional planning commission mechanism was simply not designed by the Alberta Government to assume planning powers of the local municipalities; its role is basically advisory, and subservient to the local municipalities. As a result, the commission's activities are usually quite innocuous (i.e. formulating data inventories, assisting local municipalities with their own separate plans, and preparing impact studies). The inability to promote

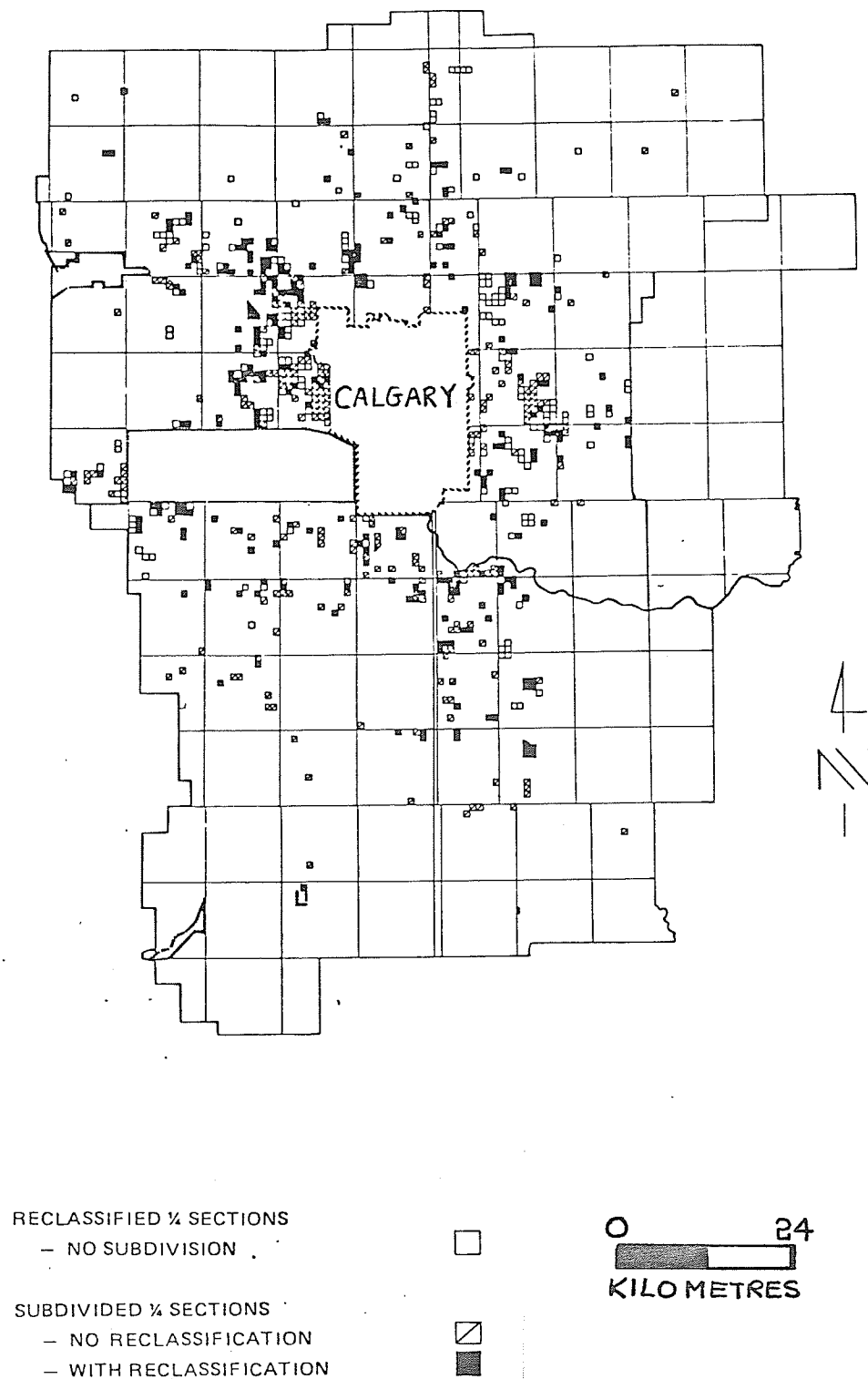


FIGURE 5 - RURAL RESIDENTIAL LAND FRAGMENTATION -
CALGARY METROPOLITAN REGION

regional planning is hampered by another factor.

The greatest weakness in Alberta's regional planning approach results from the Provincial Government policy of not forcing municipalities within a planning region to join the Regional Planning Commission for that region. Over the years this has resulted in scattered membership in most Commissions, which militates against preparing and implementing regional plans in consultation with local municipalities. 19

Finally, as Mr. Ian Bender of CRPC testifies, the multi-municipal administration situation encourages inter-municipal competition. Consequently, the CRPC must assume a role as planning arbitrator and propose regional plans that compromise the competing municipal interests. As a result, overall orderly land use planning for the region is relegated.

Over the years, the Commission has vigorously pursued a set of planning policies. ...Despite the Commission's relative success in pursuing such policies, it is faced with the fact that the municipalities naturally have their own self interests, and the Commission must reach compromises on many issues which affect the region, such as industrialization. 20

In conclusion, the multi-municipal situation that exists within the Calgary metropolitan region has prevented the CRPC from achieving any prominent success with respect to the implementation of orderly land use planning. Consequently, it is not surprising that the City of Calgary recently proposed extensive annexation to expedite the implementation of orderly land use planning within its metropolitan region.

Without doubt the most important concept and objective of the City Council, which has been consistently supported over the years, is the principle of one local government to manage the metropolitan urban community of Calgary. ... this annexation, if approved, will bring under City jurisdiction almost all of the land surrounding the City that is considered to have an urban development potential over the next twenty years. ... Council can prepare long term plans with the assurance that the lands are under its jurisdiction and control. 21

2. Unicity-Additional Zone Structure

(City of Winnipeg - Province of Manitoba)

Although the one-tier, Unicity structure of government became official on January 1, 1972; the Additional Zone mechanism was instituted in conjunction with the establishment of Winnipeg's two-tier metropolitan or "Metro" government.

In 1960, the Metropolitan Winnipeg Act was introduced into the Manitoba Legislature and was adopted. The era of 'Metro Winnipeg' had begun. The essential effect of the Act was to create a two-tier structure of government - a metropolitan level and an area municipality level - and it allocated responsibilities and powers to each level respectively. ... There were also created an 'Additional Zone' which surrounded the Metro area and extended beyond the Metro boundary to an average distance of about five miles. ... In matters of planning, zoning, building controls and property assessment for tax purposes the metropolitan government's authority was extended to include the Additional Zone. 22

In 1969, the New Democratic Party defeated the incumbent Progressive Conservative Party in the provincial elections, and by 1972, the new Provincial Government had established the one-tier Unicity form of government for the Winnipeg metropolitan area. The Unicity structure retained the Additional Zone mechanism to facilitate "regional planning" in the metropolitan region of Winnipeg. In terms of land jurisdiction, the combined Unicity-Additional Zone structure (hereafter to be referred to as UAZ) involves 654.6 square miles. The Unicity area is 218.4 square miles and the Additional Zone jurisdiction is 436.2 square miles. The 1976 census statistics indicate that the UAZ area had a population of 560,894. The present 1980 estimate would be approximately 625,000. 23

The UAZ area involves City of Winnipeg jurisdiction over

seven municipalities. The jurisdiction is for all of the land within the boundaries of East St. Paul and West St. Paul municipalities, and for only part of the land contained within the boundaries of Rosser, Macdonald, Ritchot, Tache, and Springfield municipalities. (see Figure 6) ²⁴

As a result of this involvement on the part of other municipalities, the UAZ structure represents a multi-municipal administration situation. With respect to decision-making, the UAZ area features an Additional Zone committee with six members: three members from the various rural municipalities, and three from the City of Winnipeg. (see Figure 7 for description of UAZ decision-making process) ²⁵

The objective of the Additional Zone mechanism is to control urban sprawl, and to provide the Winnipeg metropolitan region with an orderly economic growth pattern. To accomplish this goal, each of the rural municipalities within the Additional Zone share a mutual veto power with the City of Winnipeg. As a consequence, any City proposal has to be approved by the local municipality, and vice-versa. ²⁶

Unfortunately, this type of decision-making procedure and allocation of powers remains multi-municipal in effect; and as a result, the UAZ mechanism has not been too successful with respect to implementing an orderly land use planning process within its metropolitan region. This lack of success can be documented because some land use problems of the rural-urban fringe area have been encouraged to continue.

For example, the multi-municipal nature of the UAZ

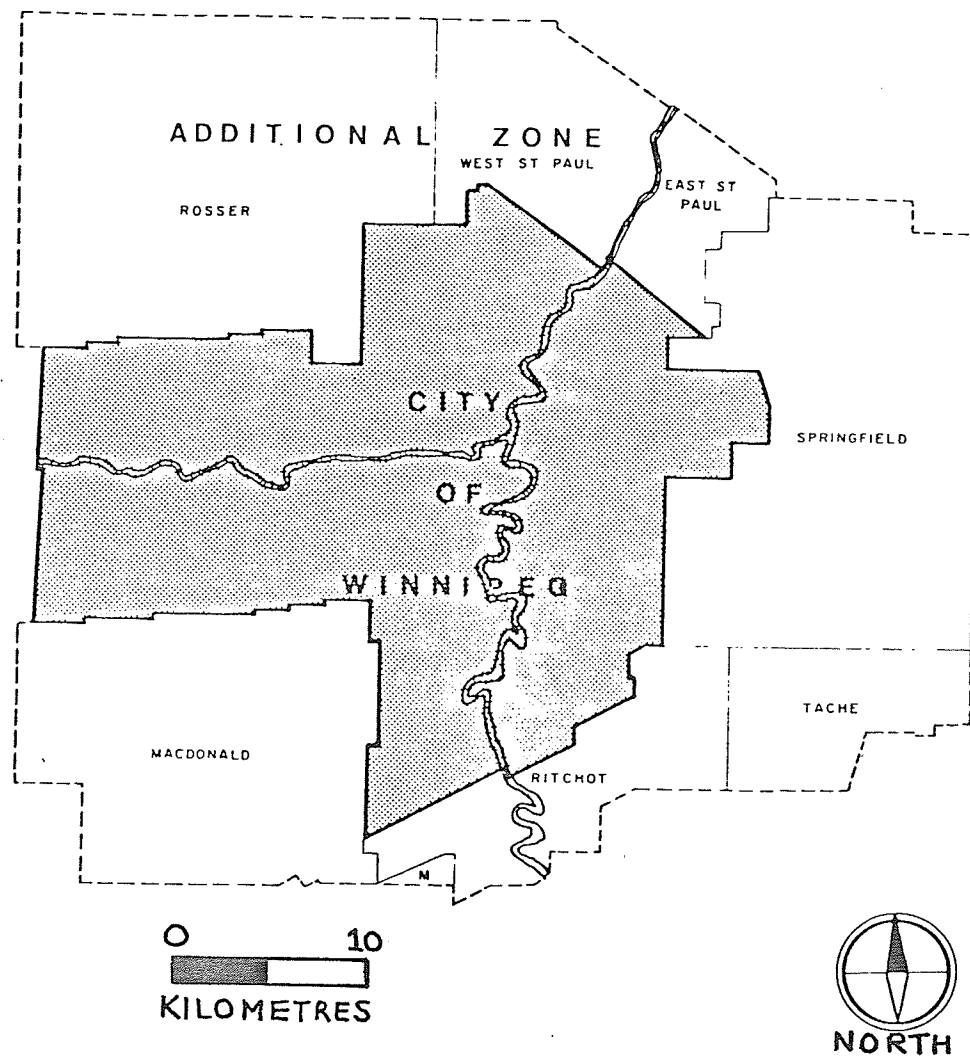


FIGURE 6 - CITY OF WINNIPEG AND ADDITIONAL
ZONE MUNICIPALITIES

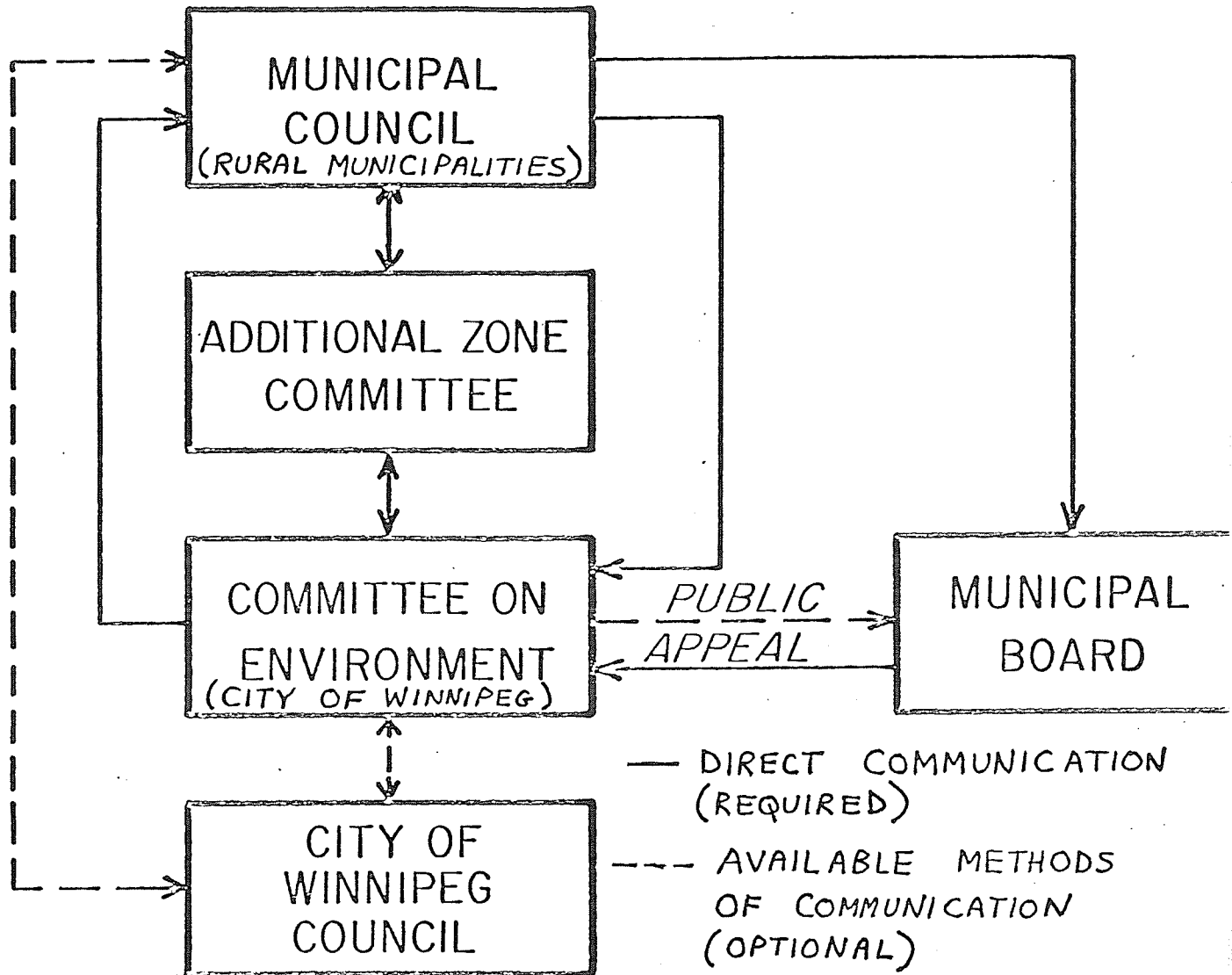


FIGURE 7 - UNICITY-ADDITIONAL ZONE AREA:
DECISION-MAKING PROCESS

arrangement has meant the recent loss of some potential parkland, the development of some incompatible land use situations, and the invasion of some environmentally sensitive areas. These problems have, or will become apparent as a result of the following decision.

Prior to the summer of 1974, all lands in the Additional Zone, save specified villages, were designated 'Areas of No Urban Expansion.' In 1974 the city adopted an amendment to the Greater Winnipeg Development Plan which made available approximately one-sixth of the Additional Zone or 68 square miles for potential limited urban expansion. ... The greatest weakness of the amendment is the lack of an adequate or obvious criterion illustrating why some areas were designated for limited urban expansion and why others were not. 27

The designation is an unequivocal example of the "local-oriented or non-regional" decisions that regional planning structures such as the UAZ make when the power foundation is multi-municipal. As indicated previously, this designation created some land use problems. The following excerpt outlines these problems in more detail.

The Development Plan has encouraged the formation of unrealistic development expectations by designating for limited urban expansion: flood-prone land along the Red River in Ritchot; Prairie Grove in Springfield which is surrounded on all sides by livestock operations; a large part of the most significant water recharge area in the Winnipeg area. 28

Furthermore, the UAZ structure and its accompanying multi-municipal power base has encouraged the continuity of other particular problems.

For instance, the growth pattern or morphological development of the region has been somewhat haphazard and amorphous as a result of the UAZ rural municipalities having different planning by-laws. In fact, one municipality does not

even have a by-law. 29

Secondly, the Additional Zone mechanism of the UAZ structure has functioned in precisely the same fashion as a "greenbelt" by encouraging non-contiguous development beyond its legal influence. The deleterious effects of urban sprawl and high density rural residential development are becoming quite severe in the areas that are outside the UAZ boundary, but still within the geographical limits of the Winnipeg metropolitan region.

Most will agree the Additional Zone has served its purpose in restricting urban sprawl beyond the immediate urban area. However, from a broader perspective it has only displaced the phenomenon of urban sprawl to the edges of the Additional Zone. The rural municipalities of St. Andrews, St. Clements, Ritchot and Tache are testimony to the leap-frog movement of urban sprawl beyond the Additional Zone or the city's planning jurisdiction. 30

As the continuity of these land use problems would document, the multi-municipal base of the UAZ structure has been quite influential in preventing the implementation of efficacious regional planning in the Winnipeg metropolitan region. For instance, the City of Winnipeg and a number of rural municipalities compete for industrial development. This competition does not encourage a "regional planning" perspective on behalf of the City of Winnipeg, and consequently; parochial or uncoordinated land use planning is allowed within the region. This situation is promoted to a greater degree by certain rural municipalities that prefer industrial or urban development, and others that opt for agricultural preservation (e.g. some pro-agricultural preservation rural municipalities are currently

preparing development plans that will limit land severances to a minimum of 80 acre parcels.)³¹

Moreover, the UAZ structure has not been very successful with respect to implementing orderly land use planning because the current Provincial Government is more committed to the preservation of multi-municipal administration than the promotion of regional planning principles. The following clause of the Manitoba Planning Act reveals this commitment to multi-municipal administration of the Winnipeg metropolitan region.

Part III - District Planning ... Lands in Additional Zone 14(8) Subject to section 96, where any part of the area included in a planning district is within the additional zone, as described under subsection 4(2) of The City of Winnipeg Act, the jurisdiction of the City of Winnipeg over that area shall cease and this Act shall apply on, from and after the date of establishment of the Planning district... 32

The effect of this policy is that rural municipalities within the UAZ area can secede and incorporate as independent planning districts (or join with other municipalities to form a district). The probable outcome of this action would be even more uncoordinated and parochial planning within the Winnipeg metropolitan region.

Finally, the UAZ structure has not been very successful because the mutual veto power feature has been an obstacle with respect to implementing an orderly land use planning process within the Winnipeg metropolitan region. Essentially, the mutual veto power has fostered the detrimental effects of multi-municipal administration.

In essence on all major decisions the local municipality and the City of Winnipeg share a mutual veto power. In principle this should encourage a close liaison between the two bodies on all major issues. However, in application,

it has delayed the implementation of a comprehensive zoning by-law for the Additional Zone and the adoption of district plans. The mutual veto power has become a very strong incentive to maintain the status quo and informalize the process of coping with major planning issues and problems. 33

In conclusion, the UAZ structure has not been successful within the Winnipeg metropolitan region due to the Provincial Government's political preference for maintaining multi-municipal administration. This contention can be corroborated:

What it does suggest is that the existing arrangements for planning in the urban/rural fringe do not have the scope to effectively deal with the whole of the contemporary problems attributed to the spread of urban development beyond the solidly urban area. 34

Consequently, it is not too surprising that the Additional Zone Committee has considered an alternative to the UAZ structure for achieving the implementation of orderly land use planning within the Winnipeg metropolitan region. "The City centred region or regional government appears to be a logical phase in the evolution of local government as it struggles with municipal problems that no longer respect existing municipal boundaries." 35

3. Regional Municipality (Province of Ontario)

Two particular regional municipalities will be examined to demonstrate that unsuccessful regional planning is not just endogenous to one specific metropolitan region that has a regional municipality mechanism. These two metropolitan regions will be examined after general information is presented that pertains to both regions and their regional municipality mechanisms. Plunkett and George provide a pertinent description of the objective of the two-tier regional municipality structure.

This system was initially heralded as the solution to the problem of governing an urban area encompassing several municipalities. The essential feature of this system is the establishment of an upper tier or level of government for an urban area to which the local municipalities appoint (or elect) representatives. The upper tier is allocated those functions which have area-wide implications such as planning, water supply, sewerage disposal, and public transit. The lower tier, local municipalities generally retain functions which are defined as pertaining to purely local issues. 36

As well, the intention of establishing regional municipalities in various metropolitan regions was to achieve economies of scale in the provision of services that were regional in scope, but in being duplicated by the various local governments, were experiencing diseconomies of scale.

Since regional municipalities have the statutory authority to implement regional plans,³⁷ one might assume that the regional municipality structure has been successful with respect to achieving orderly land use planning within metropolitan regions. Unfortunately, this has not been the case. Typically, regional municipality structures have not been successful due to multi-municipal administration. Many land use problems continue, and regional plans reflect the necessity of compromising divergent and parochial political interests. As a consequence, regional planning principles are not a priority.

The regional government council is composed of local councillors who often feel that their primary responsibility is to protect the autonomy of their own municipality. Nor are they always above petty local pride and jealousy. Consequently the Official Plan authorized by the regional government is often not the strongest possible document, but is a compromise which sometimes places political expediency above the quality of the natural and man-made environment. 38

Similiar to the Manitoba situation, the Provincial Government of Ontario has more political power to gain by retaining multi-municipal administration (i.e. allowing the parochial rural municipalities, which supply political support; to maintain planning control over their local domains regardless of whether or not they are within the spatial boundaries of a metropolitan region).

The following section will illustrate how multi-municipal administration has prevented two regional municipality structures from achieving any efficacious regional planning in their particular metropolitan regions.

a. Regional Municipality of Ottawa-Carleton

The Regional Municipality of Ottawa-Carleton (hereafter to be referred to as RMOC) was incorporated on June 15, 1968, and commenced operation on January 1, 1969. The land jurisdiction of the RMOC is 1,100 square miles, and as of 1976, the total population of the RMOC was 521,418. Presently, the population of the RMOC is nearing an estimated 600,000.³⁹

The RMOC involves eleven municipalities which includes the City of Ottawa, City of Vanier, Village of Rockcliffe Park, and the eight rural-oriented townships of Cumberland, Gloucester, Goulbourn, March, Nepean, Osgoode, Rideau, and West Carleton. (see Figure 8)⁴⁰

Representation by local politicians on RMOC is allocated in the following fashion:

The council of the RMOC is composed of members of the local councils in the Region. The City of Ottawa sends all 11 aldermen, plus the four controllers and its Mayor,

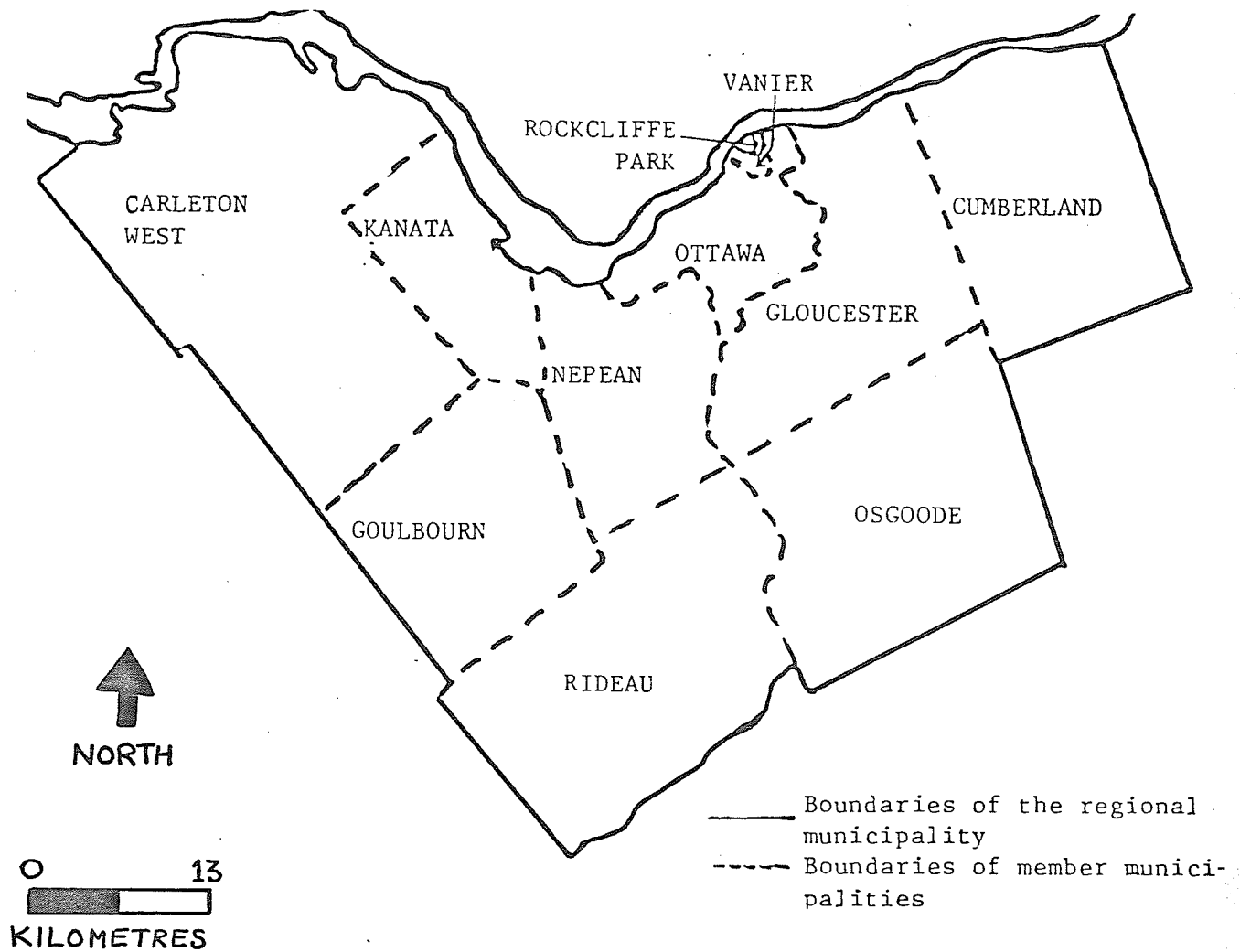


FIGURE 8 - REGIONAL MUNICIPALITY OF OTTAWA-CARLETON
(AND MEMBER MUNICIPALITIES)

to the Regional Council for a total of 16; Nepean Township is represented on Regional Council by three members; the City of Vanier and Gloucester Township each have two. The remaining seven municipalities are represented at Regional Council by the head of the local council, for a total of 14. 41

The distribution of seats on RMOC is quite equitable and reflects each municipality's population. For example, Ottawa has 60% of the region's population and a comparable number of seats (i.e. one seat over 50%). However, this type of local-based representation is multi-municipal in effect, and it has seriously hampered the regional planning process within the RMOC metropolitan region. The multi-municipal administration situation has encouraged the typical inter-municipal competition for tax-intensive development. This parochial competition has been responsible for some uncoordinated land development decisions, and the overall effect of haphazard growth. The following newspaper article provides evidence of this inter-municipal competition.

To even the most casual of observers regional government these days appears to be cracking around the foundations. ... The Township of Gloucester is appealing the Ontario Municipal Board decision on the South Keys shopping plaza being planned for Ottawa; Ottawa is appealing the OMB decision on the Eastgate Shopping Plaza in Gloucester. 42

The multi-municipal foundation of the RMOC has been extremely effective in promoting local land use preferences, and relegating orderly land use planning within the region. The parochial, inter-municipal competition that is encouraged by a multi-municipal situation is quite prominent in the RMOC metropolitan region.

Firstly, there is a strong tendency for councillors serving at the regional level, representing local councils, to take a parochial 'what's-in-it-for-my municipality' viewpoint with a concomitant failure to view issues regionally. The indirect method produces a United Nations type atmosphere at regional councils with members acting like ambassadors of nation-states defending 'national sovereignty' at the expense of global action. The 'indirect' councillors' power base is at the lower tier, hence their chief loyalties lie there also. The result of this is to undermine the authority and effectiveness of regional councils. 43

As a consequence of this situation, the RMOC has been unable to implement a regional planning process that reflects a regional consensus. As the following excerpt confirms, "regional planning" by the RMOC has created conflicts; and not consensus.

The Regional Municipality of Ottawa-Carleton is the regional structure which takes in all of the fringe area. ... It attempts to form a regional consensus, but to a large extent the townships compete among themselves and unite together against the City of Ottawa in terms of attempting to attract development. At best, the regional consensus is often compromise. The region's official plan has attempted to co-ordinate and overlap the various plans of all the townships but there has been conflict among the proposals for land use of the region. 44

In conclusion, as a result of the multi-municipal power base of the RMOC, an orderly land use planning process has not been apparent in the Ottawa-Carleton metropolitan region. Consequently, it is not surprising that an alternative to RMOC has been proposed by the City of Ottawa.

Ironically the one possible solution that could satisfy both urban and rural interests in the region comes from Ottawa. The establishment of a one-tier government encompassing Ottawa and the immediate urban centres, such as Gloucester, Nepean and Vanier, has been suggested to the province more than once. ... So far the province has turned a deaf ear to this proposal. But increasing tension between the two factions may help to revive it. One tier government would, at least, eliminate the duplicating of functions at the local and regional levels. 45

b. Regional Municipality of Hamilton-Wentworth

The Regional Municipality of Hamilton-Wentworth (hereafter to be referred to as RMHW) was incorporated on October 15, 1973, and commenced operations on January 1, 1974. The land jurisdiction of the RMHW is 432 square miles, and as of 1976, its total regional population was 409,331. Presently, the region is estimated to have a population of 500,000.⁴⁶ The RMHW involves these municipalities: the City of Hamilton, the Township of Flamborough, and the Towns of Ancaster, Dundas, Stoney Creek, and Glanbrook. (see Figure 9)⁴⁷ The RMHW has the following form of local municipal representation.

Regional Council is composed of twenty-eight (28) members including the Chairman. Representation from the City of Hamilton includes the Mayor, the four members of the Board of Control and twelve aldermen. The twelve aldermen, who are members of Hamilton City Council, are elected to Regional Council by their fellow City Council members. From the other five area municipalities, the Mayor and one other member, who was elected on an area wide basis for the position of Regional Councillor, sit on Regional Council.⁴⁸

This type of representation provides the City of Hamilton with 63% of the regional seats and a majority on the RMHW Council. Similiar to the RMOC situation, this form of political representation maintains a multi-municipal situation within the RMHW metropolitan region. Typically, the multi-municipal power base of the RMHW has interfered and frustrated attempts to implement an orderly land use planning process within the Hamilton-Wentworth metropolitan region. In a manner comparable to the RMOC situation, RMHW councillors will prioritize local or municipal concerns and relegate any regional matters to secondary consideration as the Stewart Commission documents.

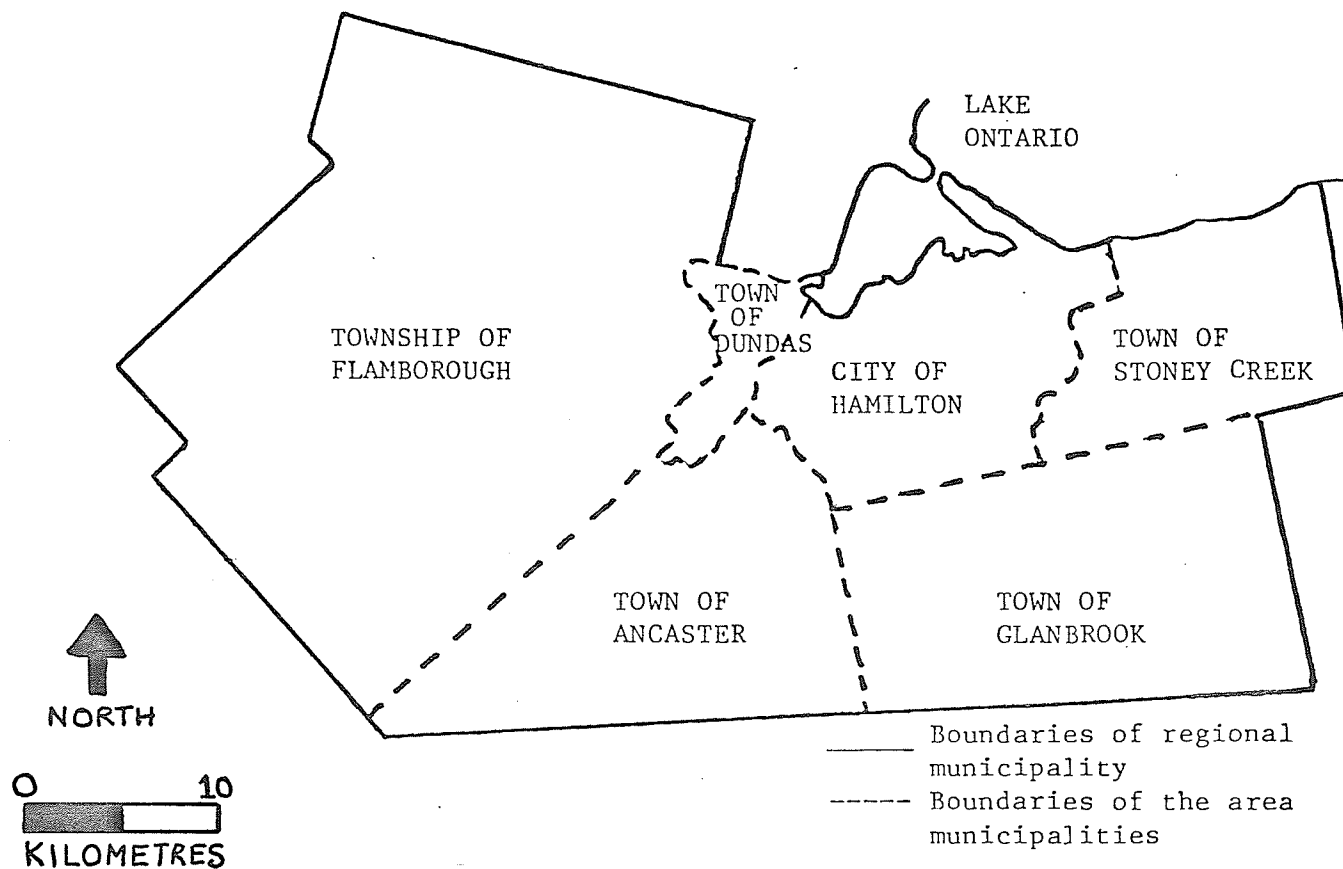


FIGURE 9 - REGIONAL MUNICIPALITY OF HAMILTON-WENTWORTH
(AND MEMBER MUNICIPALITIES)

There is evidence, however, that the task of developing policies to satisfy regional needs is often set aside as a result of the desire of each municipality to protect its separate existence and to get what it considers the best deal possible for its own residents, even at the expense of the overall needs of the people of the region. 49

As well, regional planning in the RMHW metropolitan region has been impeded by an intense competition for land control between the City of Hamilton and its rural neighbours.

The processes of learning to work together and of recognizing common interests have not gone very far. The main problem confronting municipal government in this area is the suspicion and the acrimony between city and non-city municipalities, which, in our view, are fostered by the present regional government structure. 50

As a consequence, regional planning in the RMHW region has been an innocuous compromise of the various municipal interests. As well, an authentic regional consensus or perspective has not been developed.

The single most important reason for establishing regional government is to permit region-wide planning. Nevertheless, the present structure has failed to allow the development of common perspectives, and there are indications that there maybe some difficulty in securing general agreement to the proposed official plan. ... We find these distressing examples of what happens in a structure that emphasizes protection of the separateness of municipalities. 5

In conclusion, the RMHW can be considered as very similar to the RMOC situation. Due to multi-municipal administration, orderly land use planning of the Hamilton-Wentworth metropolitan region has been relatively inconspicuous. In view of this inadequate situation, the Stewart Commission has proposed an alternative to the RMHW governing structure.

The Commission is convinced that a single local government, assuming all municipal responsibilities for the entire region, is needed to provide a structure that is able to respond effectively and efficiently to the needs and wants of the citizens of the region. 52

D. Summary

The chapter commenced with a general description of how multi-municipal administration prevents the implementation of orderly land use planning within metropolitan regions.

These general detrimental effects of multi-municipal administration were documented by reference to four Canadian regional planning structures. These case studies were the Regional Planning Commission (Province of Alberta-City of Calgary), Unicity-Additional Zone mechanism (Province of Manitoba-City of Winnipeg), and the Regional Municipality Province of Ontario- Ottawa-Carleton and Hamilton-Wentworth).

Generally, none of these structures have demonstrated any success with respect to achieving orderly land use planning within their metropolitan regions.

As a final consideration, it is interesting to note that during analysis of these four structures, one prominent theme was emphasized. As a result of the lack of success that was achieved by these structures and their accompanying multi-municipal power bases with respect to implementing orderly land use planning, various writers and researchers claimed and advocated that the uni-municipality strategy of administration would be a better alternative. The following chapter will investigate this claim.

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CHAPTER VI

A DISCUSSION OF THE UNI-MUNICIPALITY STRATEGY OF ADMINISTERING METROPOLITAN REGIONS

A. Introduction

The purpose of this chapter is to discuss the uni-municipality strategy of administering metropolitan regions as it relates to the question of whether or not such a strategy is more advantageous than multi-municipal administration for achieving orderly land use planning within a metropolitan region. Dickinson provides an opinion with respect to this particular query.

There are cases where large cities have expanded their administrative limits well beyond their present built-up areas to embrace the whole of their 'potential settlement areas,' and such cities are able to enforce throughout their administrative area, town-planning measures which regional planning authorities cannot do. 1

Dickinson's claim will be investigated by examining a specific case study of a proposed uni-municipality strategy (i.e. the City of Edmonton "Horizon 21" annexation scheme). As defined in Chapter I, a uni-municipality strategy represents not only a static form of government, but a dynamic process involved in achieving the establishment of a single municipal corporation with jurisdiction over all land that is within the spatial dimensions of a metropolitan region.

To date, the uni-municipality strategy has never been established in any of Canada's metropolitan regions (i.e. in a format that would be indicative of the uni-municipality strategy

definition). Consequently, the potential benefits or advantages of the uni-municipality strategy will have to be ascertained by assessing the possible impact that the City of Edmonton's uni-municipality strategy will have for achieving orderly land use planning within the Edmonton metropolitan region.

B. A Case Study of The Proposed City of Edmonton Uni-Municipality Strategy: The Horizon 21 Annexation Scheme

1. Historical Background of The City of Edmonton Uni-Municipality Strategy

The demand for a uni-municipality strategy within the Edmonton metropolitan region has been a significant issue for the last twenty-five years. The first announcement of a need for a uni-municipality was in 1956. This opinion was stated by the McNally Commission, or Royal Commission on the Metropolitan Development of Calgary and Edmonton.

A metropolitan area which is in fact one economic and social unit can ordinarily be more efficiently and effectively governed by one central municipal authority than by a multiplicity of local governing bodies. 2

(see Figure 10 for description of McNally Commission's proposed uni-municipality)³

In 1968, Professor Eric J. Hanson completed a report entitled The Potential Unification of The Edmonton Metropolitan Area-A Fiscal Study of Annexation and Amalgamation. Similiar to the conclusions of the McNally Commission, Professor Hanson considered the uni-municipality strategy as a desirable alternative for governing the Edmonton metropolitan region.

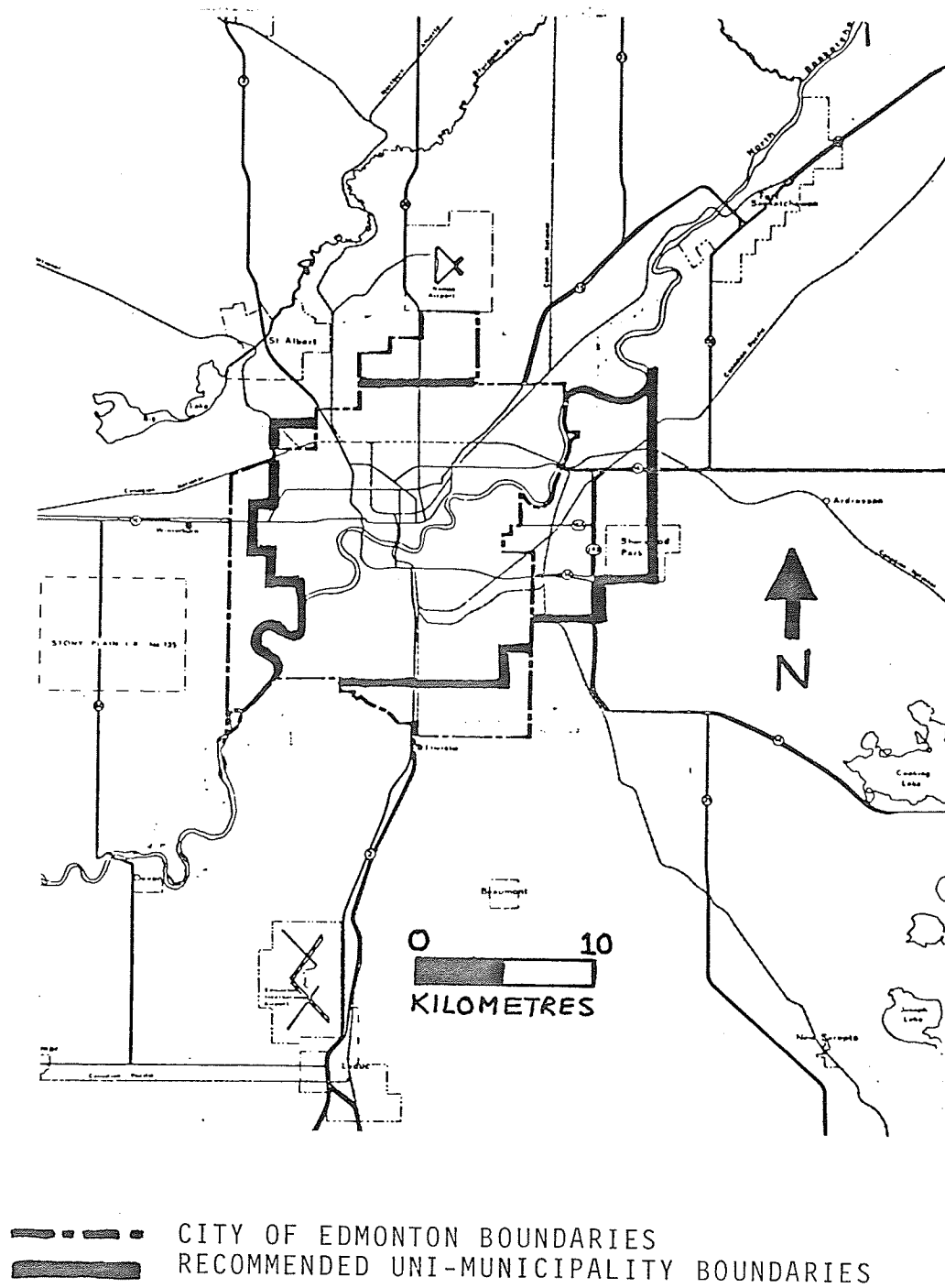


FIGURE 10 - McNALLY COMMISSION OF 1956: PROPOSED CITY OF EDMONTON UNI-MUNICIPALITY STRATEGY

In general, it is desirable that the area of the local government correspond closely to the area of the economic and social community. ... It is desirable at this stage to concentrate on the reorganization of government in the metropolitan area along integrated lines, to provide one government, the City, with jurisdiction over the whole metropolitan area. 4

Hanson's proposed uni-municipality was more indicative of the spatial dimensions of the Edmonton metropolitan region than the McNally boundary adjustments. (see Figure 11)⁵

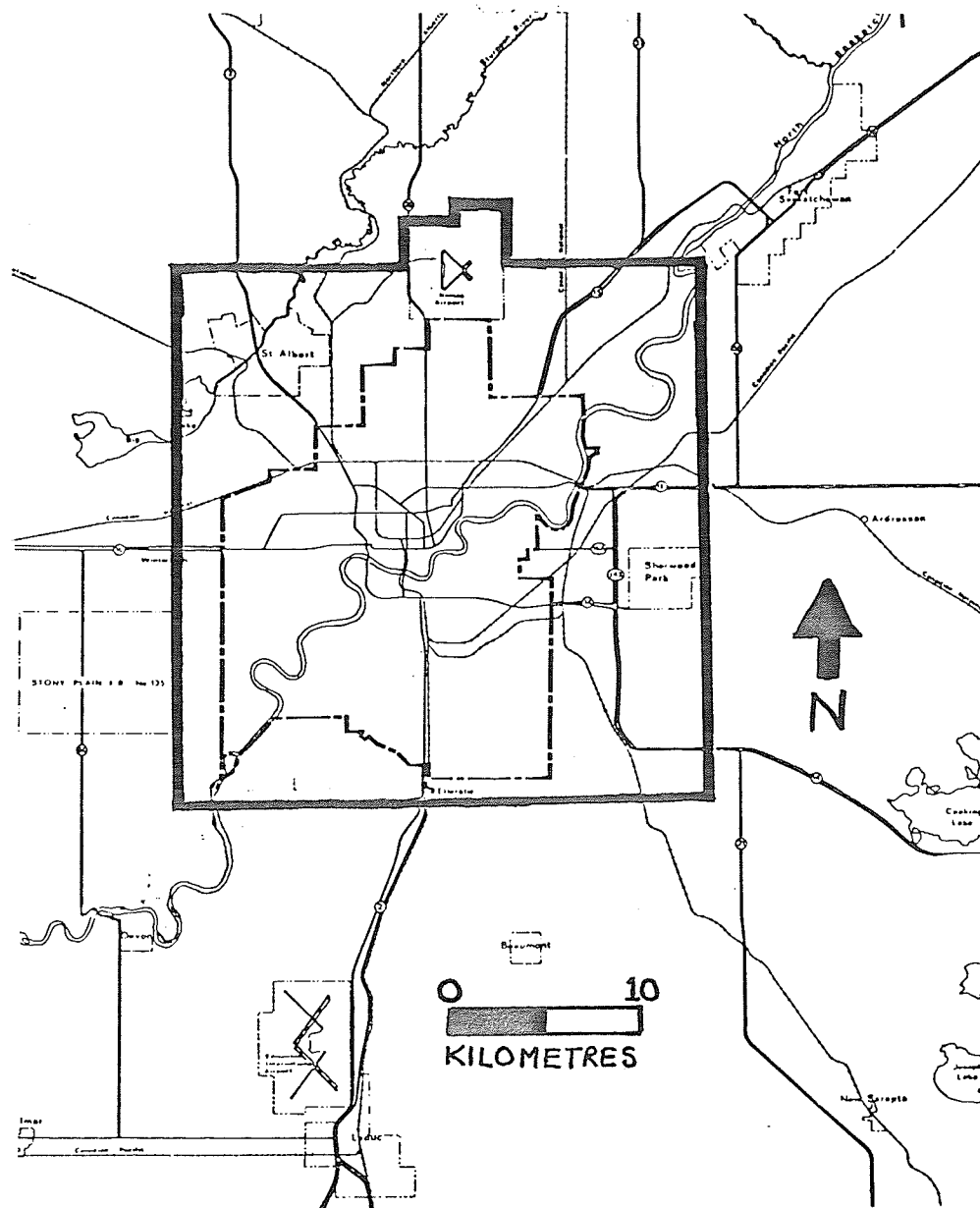
In 1973, the City of Edmonton submitted a document entitled The Future of This City: Or Has This City A Future?, to the Provincial Government of Alberta. The intention of the document was to stimulate and revive the notion of expanding the City of Edmonton's jurisdiction to include more of its metropolitan region. The most prominent theme of the report was comparable to the McNally and Hanson conclusions (i.e. the requirement of a uni-municipality strategy to administer the Edmonton metropolitan region).

The urbanized area should be contained in one governing unit to optimize long-range, comprehensive planning for the area. Comprehensive planning, to be meaningful, requires the integration of political, administrative, economic, social and physical planning. 6

The City of Edmonton outlined uni-municipality boundaries that were almost identical to Hanson's proposed adjustments. (see Figure 12)⁷

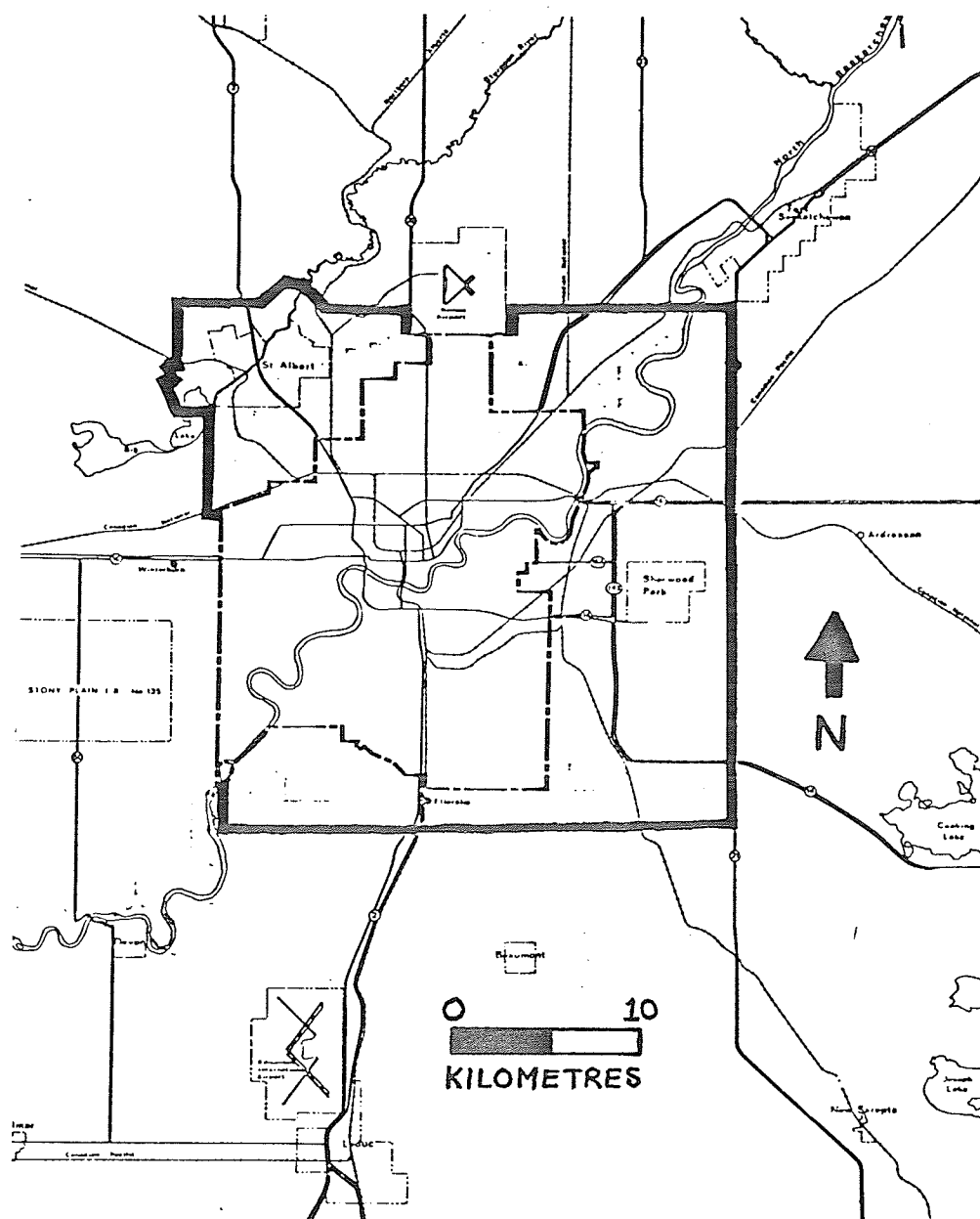
2. A General Description of The City of Edmonton Horizon 21 Annexation Scheme

In 1978, the City of Edmonton indicated its desire to gain control of its metropolitan region. This most recent annexation scheme is euphemistically classified as the Horizon 21



- - - - - CITY OF EDMONTON BOUNDARIES
 ————— RECOMMENDED UNI-MUNICIPALITY BOUNDARIES

FIGURE 11 - HANSON REPORT OF 1968: PROPOSED CITY OF EDMONTON UNI-MUNICIPALITY STRATEGY



- - - - - CITY OF EDMONTON BOUNDARIES
 ————— RECOMMENDED UNI-MUNICIPALITY BOUNDARIES

FIGURE 12 - "FUTURE OF THIS CITY" REPORT OF 1973:
PROPOSED CITY OF EDMONTON UNI-MUNICIPALITY
STRATEGY

proposal.

City of Edmonton politicians and administrators are proposing the Horizon 21 annexation scheme as a method of instituting uni-municipal control over the Edmonton metropolitan region. It is the contention of these Horizon 21 advocates that uni-municipal control of the metropolitan region will be more advantageous than the existing multi-municipal situation with respect to achieving orderly land use planning. This will be necessary in light of two trends that seem probable: the Edmonton metropolitan region will experience substantial population growth to approximately 1,364,000 by the year 2020; and secondly, current land reserves for residential and industrial growth will be consumed by the end of the present decade.⁸

As well, Horizon 21 is being proposed for non-planning reasons. Initially, the establishment of uni-municipal jurisdiction is considered as an appropriate technique for reducing the costs of administrative duplication. More significantly, Horizon 21 is being proposed to stabilize the financial situation within the metropolitan region of Edmonton. The intention is to acquire more land for assessment purposes so as to increase property tax revenues, decrease the municipal deficit, and stabilize mill rates within the region. An additional objective of acquiring more land for assessment is the concern for balancing fiscal inequities or distribution of service costs. As the "Future of This City" report outlined, all residents of the Edmonton metropolitan region should be

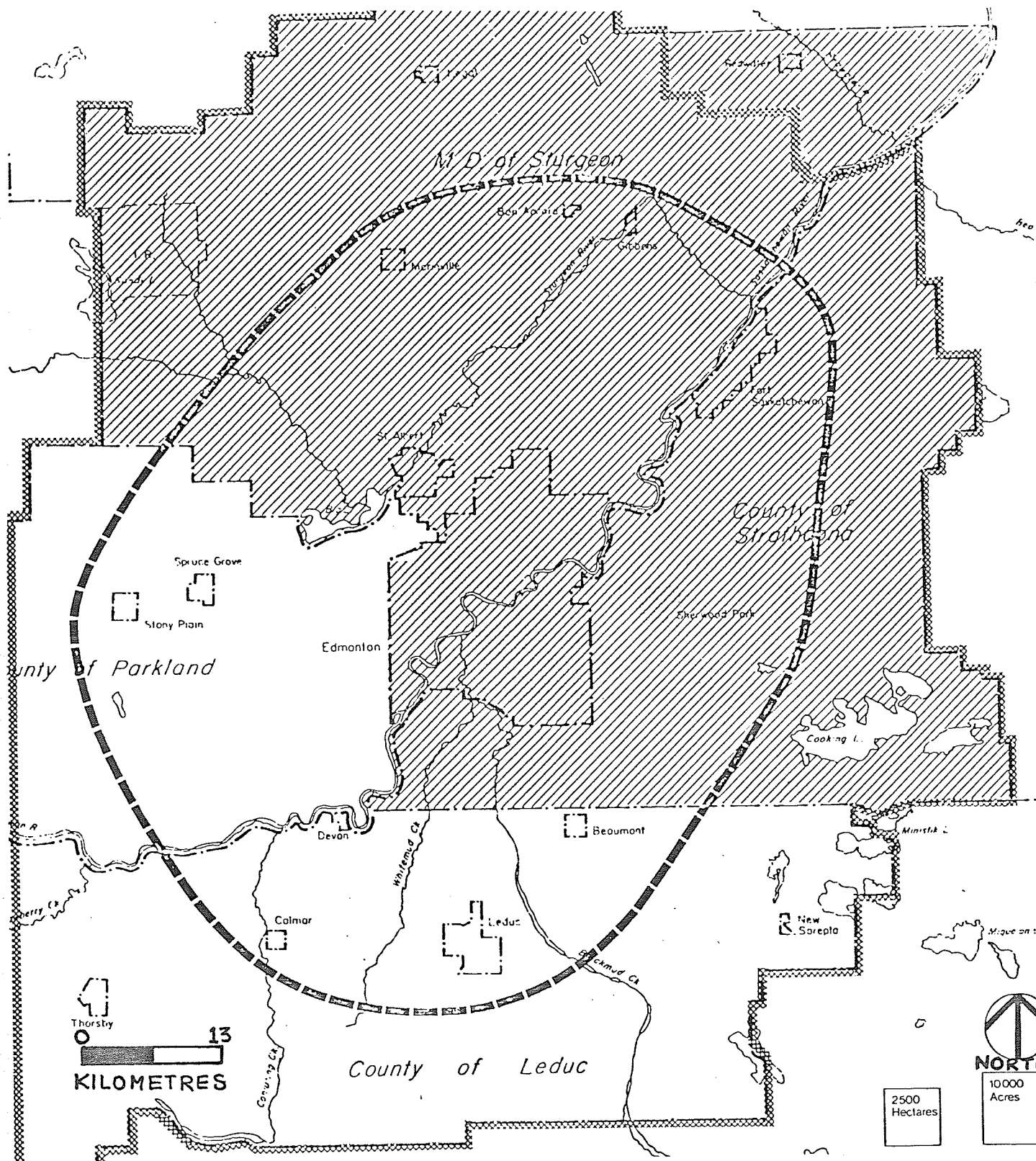
expending equal amounts of capital for services.

Residents of the urban unit consider themselves, in effect, Edmontonians. These 'non-resident' Edmontonians' enjoy the cultural and social amenities which Edmonton provides and use the major roadways as much or more than resident Edmontonians to get to work, to shopping centres, or to recreation areas. ... But the non-resident Edmontonians do not pay for any of the Edmonton services which they enjoy and demand. 9

3. Discussion of The Proposed Land Jurisdiction of The Horizon 21 Annexation Scheme

An authentic uni-municipality was previously defined as a municipality that acquires jurisdiction over the land within the spatial dimensions of its metropolitan region. Accordingly, if the proposed land jurisdiction of the Horizon 21 proposal is to be considered as a bonafide uni-municipality strategy; its boundaries would have to be coterminous with the boundaries of the Edmonton metropolitan region.

For the purposes of comparison, the author considers the Comay Planning Consultants configuration of the Edmonton metropolitan region to be relatively accurate with respect to the four criteria that define a metropolitan region within the context of this thesis (i.e. the Comay Planning Consultants configuration encompasses a land mass that is representative of the four criteria of a metropolitan region: agricultural land use predominates in the rural-urban fringe area, the central city of Edmonton population is over 300,000, the demarcated region has approximately 600,000 people, and the periphery of the demarcated region represents a distance from the City of Edmonton that would involve a commuting time of under one hour). (See Figure 13¹⁰ - As well, refer to the Appendix for an explanation of procedures that are utilized to



- CITY OF EDMONTON BOUNDARIES
- ▨ CENSUS METROPOLITAN AREA (1976)
- CONFIGURATION OF METROPOLITAN REGION

FIGURE 13 - COMAY PLANNING CONSULTANTS CONFIGURATION OF EDMONTON METROPOLITAN REGION

demarcate metropolitan regions.)

Therefore, as demarcated by Comay Planning Consultants: the Edmonton metropolitan region includes the City of Edmonton, the two dormitory suburbs of St. Albert and Sherwood Park, the three satellite communities of Spruce Grove-Fort Saskatchewan-Leduc, a number of rural villages or towns such as Bon Accord-Morinville-Gibbons-Stony Plain-Devon-Calmar-Beaumont, and the inner parts of rural-oriented municipalities such as the Municipal District of Sturgeon-County of Parkland-County of Strathcona-County of Leduc.

Figure 14 exhibits the proposed land mass of the Horizon 21 scheme, and the boundaries of the Edmonton metropolitan region. The map illustrates that the Horizon 21 scheme is not coterminous to the boundaries of the Edmonton metropolitan region. Therefore, the Horizon 21 proposal represents a partial or quasi-example of a genuine uni-municipality strategy.

However, even though the Horizon 21 scheme only represents a quasi-example of a uni-municipality strategy, the proposed annexation scheme should reveal a rudimentary perspective of what advantages there might be with uni-municipal jurisdiction, as compared to the multi-municipal strategy of administering metropolitan regions.

4. Political Analysis of The Land Jurisdiction of The Horizon 21 Annexation Scheme

The land jurisdiction of the Horizon 21 scheme differs from the boundaries of the Edmonton metropolitan region in a number of ways.

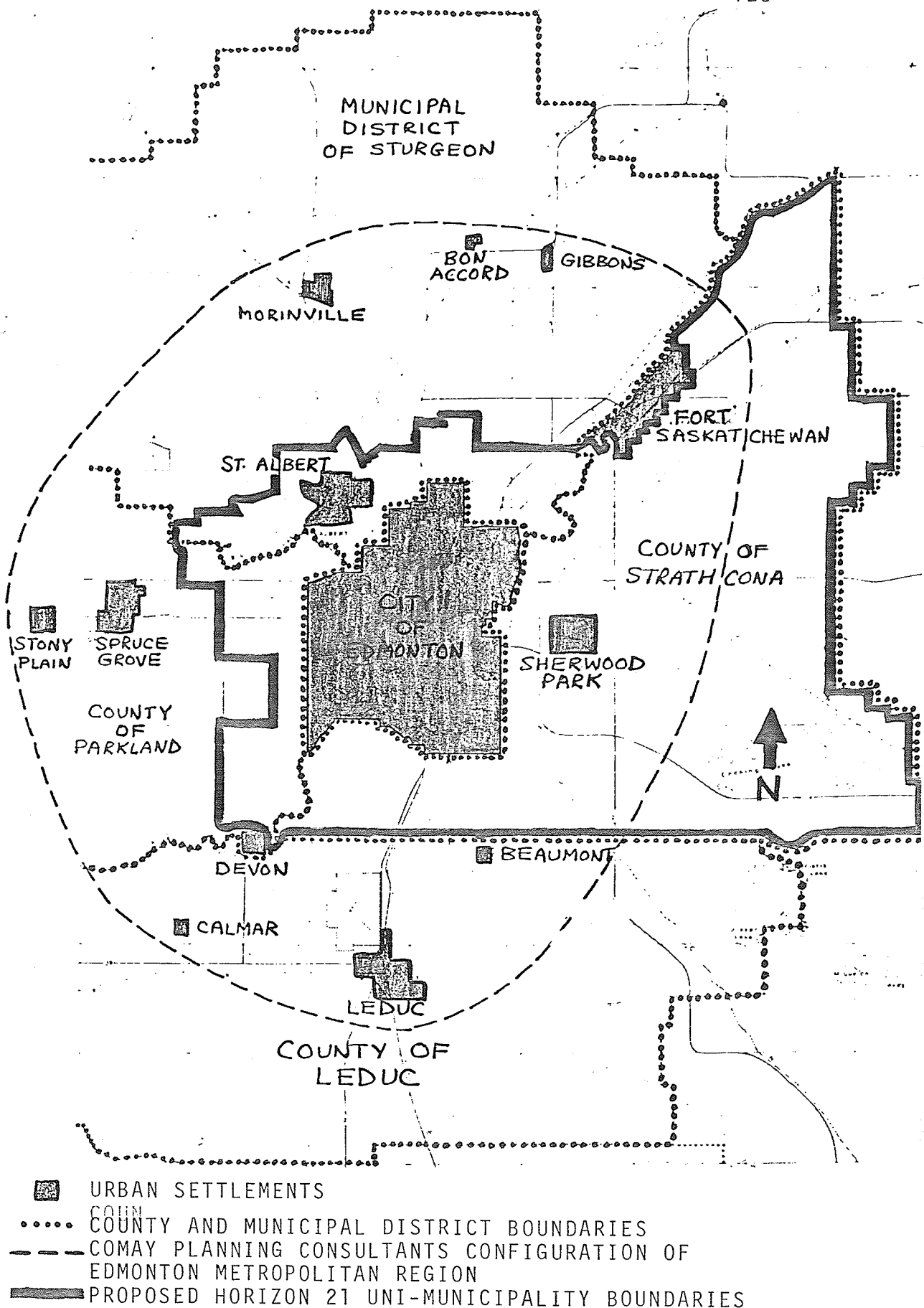


FIGURE 14 - PROPOSED HORIZON 21 CITY OF EDMONTON
UNI-MUNICIPALITY BOUNDARIES

Initially, to the north and west, only the urban fringe zone of the rural-urban fringe area would be annexed from the Municipal District of Sturgeon and the County of Parkland; and secondly, the dormitory suburb of St. Albert. (Refer to Figure 2 for description of land use zones of a metropolitan region.) This action would exclude the satellite communities of Fort Saskatchewan and Spruce Grove, a number of rural villages, and the rural fringe zone of the rural-urban fringe area in the Sturgeon and Parkland municipalities.

To the south, only the urban fringe zone of the rural-urban fringe area would be annexed from the County of Strathcona; therefore excluding the satellite community of Leduc, a number of rural villages, and the rural fringe zone of the rural-urban fringe area in the County of Leduc.

To the east, the Horizon 21 scheme features annexation of the Sherwood Park suburb, and the total County of Strathcona. By annexing the total County of Strathcona, the City of Edmonton would acquire jurisdiction over some rural land that is beyond the rural-urban fringe area of the Edmonton metropolitan region.

There are a number of politically motivated factors behind the particular land jurisdiction that is being proposed under the Horizon 21 annexation scheme.

Primarily, it is generally accepted that municipalities or communities with predominant residential land use represent deficit taxation situations (i.e. property tax revenues generated do not equate with expenses that are incurred to provide services). St. Albert and Sherwood Park represent such

situations, but only to a minor extent as a result of two factors. Both suburbs have relatively high residential assessment (middle-upper income classes) which generates higher revenues; and secondly, their proximity to the City of Edmonton reduces costs. Consequently, as a result of their lack of proximity to the City of Edmonton, such residential communities as Spruce Grove-Leduc-Fort Saskatchewan are excluded from the Horizon 21 proposal. As well, this rationale is probably applicable for a number of the smaller towns and villages (within the metropolitan region) that were excluded.

Another factor behind the particular land jurisdiction, and the exclusion of much of the rural fringe zone of the rural-urban fringe area is the agricultural land uses of the rural fringe zone. Agricultural land uses do not generate lucrative property taxes, and are therefore not attractive in terms of economic benefits.

The process of acquiring provincial ratification of an annexation application will definitely be expedited if the senior government has a minimum of "involved" municipalities to consult. This may explain why the Horizon 21 proposal only involves four municipalities: the City of St. Albert, the southern part of the Municipal District of Sturgeon, the eastern part of the County of Parkland, and the total land mass of the County of Strathcona (which includes the hamlet of Sherwood Park).

As indicated previously, much of the rural fringe zone of the rural-urban fringe area is excluded from the Horizon 21

scheme due to the predominant agricultural use. Agricultural land uses are not revenue-intensive, and consequently, only the urban fringe zone of much of the rural-urban fringe area is proposed for annexation. The urban fringe zone is required to facilitate uniform and consistent planning control; and secondly, to increase the supply of vacant land for future growth.

The exception is to the east. The Horizon 21 scheme proposes annexation of the entire County of Strathcona which geographically incorporates the entire metropolitan region (both urban fringe and rural fringe zones) and rural land beyond the periphery of the metropolitan region.

Unlike the other parts of the metropolitan region, the eastern part of the region is blessed with revenue-intensive industrial land uses. Colloquially, the industrial district is termed as "refinery row." The district is attractive to the City of Edmonton due to the obvious benefit of lucrative revenues, and because industrial areas are not expensive in terms of providing public services. "Refinery row" is a classic example of an industrial tax haven, as the following excerpt describes:

... cities add territory by annexation, usually in order to provide municipal services and controls to areas beyond the previous borders, or to take in commercial or industrial areas, existing or prospective, which would furnish an enhanced tax base while at the same time not requiring substantial expenditures for extension of municipal services, such as schools, which account for more costs in most urban areas than do any other municipal functions. 12

"Refinery row" is predominantly located in the urban fringe

zone of the rural-urban fringe area. This raises the question as to why the Horizon 21 scheme proposes annexation of the entire County of Strathcona. One perspective seems reasonable. If the dormitory community of Sherwood Park, and the vast industrial acreage of Strathcona were the only areas to be annexed; the Alberta Government would probably consider the remaining land of the County of Strathcona as not being substantial enough to warrant separate incorporation. Consequently, the remaining land would have to be amalgamated with municipalities adjacent to the eastern boundary of the present County of Strathcona.

As this "remaining" land of the County of Strathcona is predominantly rural residential and therefore, expensive to service and susceptible to environmental problems, it is probable that the municipalities adjacent to Strathcona would not approve such an amalgamation. The disapproval of these municipalities would only delay the City of Edmonton's application, and possibly, assist in defeating the application. Consequently, it is more expeditious and strategic for the City of Edmonton to annex the entire County of Strathcona to acquire control of Sherwood Park, and of most significance, the lucrative industrial acreage.

5. The Horizon 21 Scheme: Comparison of Multi-Municipal and Uni-Municipal Strategies

To consider if uni-municipal administration is a more advantageous strategy than multi-municipal administration, recommendations and conclusions from various consulting studies on the impact of Horizon 21 will be presented. Among the

consulting studies, the most informative and applicable report was a long-term planning analysis for the Edmonton metropolitan region.

a. Scenarios of The Long Term Planning Analysis

The study featured a long term planning analysis of the Edmonton metropolitan region under two boundary assumptions or scenarios. The initial scenario is the status quo option which assumes that municipal boundaries will not be altered (multi-municipal strategy of administration). The alternative scenario is the Horizon 21 option which assumes that the boundaries will be changed as proposed (the uni-municipality strategy of administration). The study employed a time-frame analysis of forty years to 2020.

The objective of the research study was to indicate the probable land development or growth patterns that would occur under the two scenarios. By comparing these two patterns, it is possible to advocate the scenario that is most advantageous for achieving orderly land use planning in the Edmonton metropolitan region.

b. Research Procedure of The Long Term Planning Analysis

The research study utilized the following procedure. Initially, the growth requirements of the following two uses were determined.

The major land uses considered in this long-term examination of growth requirements are residential and industrial. These two categories represent the basic types of land use activity which comprise and will continue to comprise the urban development pattern of the inner metropolitan area. 13

By residential land uses, the consultants mean primary

residential uses of varying densities, and the various ancillary uses that accompany residential development (i.e. education, local commercial, parks and recreation, etc.).

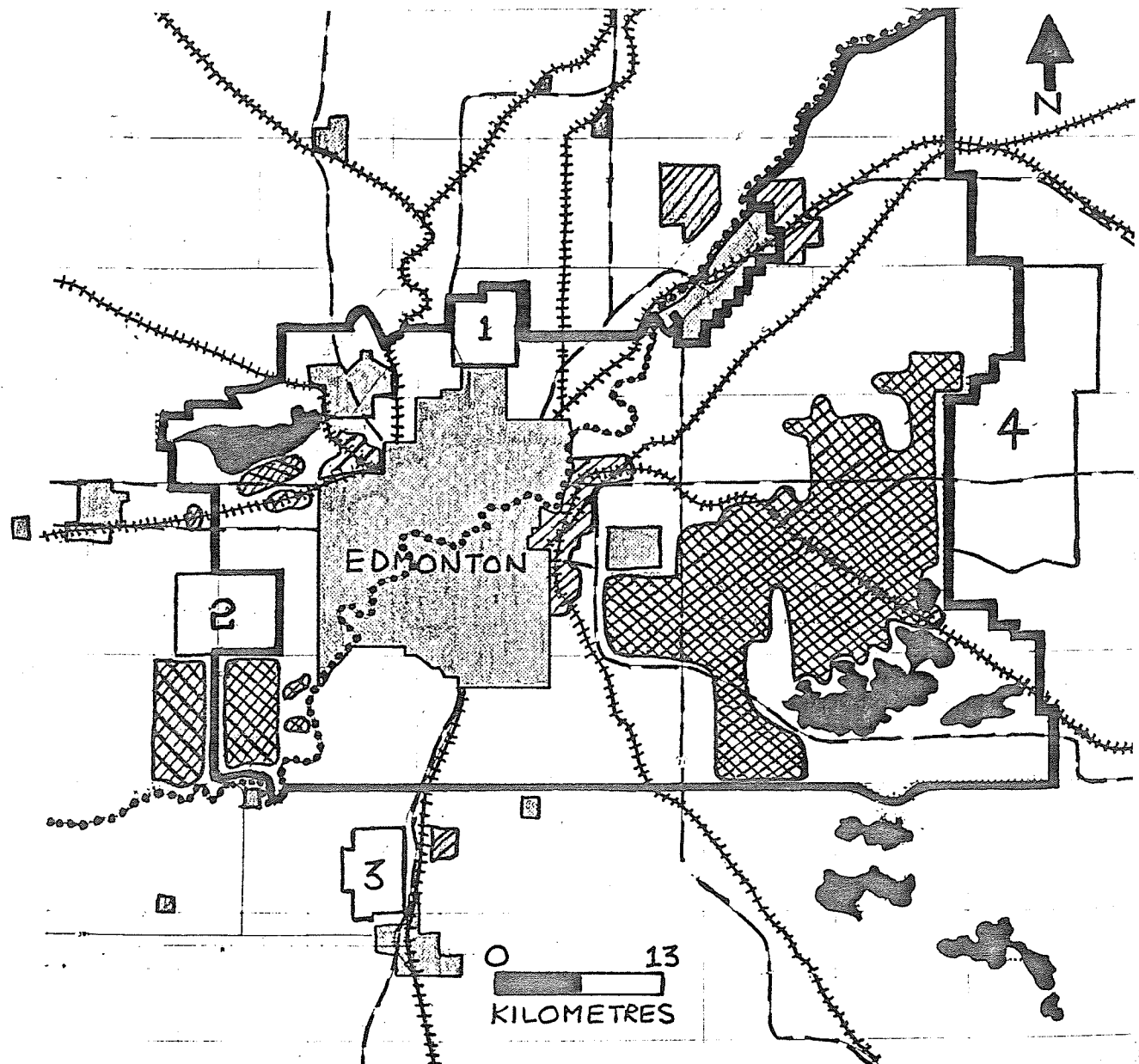
By industrial land uses, the consultants mean industrial uses of varying intensity (i.e. light to heavy activity). Through a number of integrated phases, the consultants concluded that the following quantities of residential and industrial land were required.

The Study Area will require, therefore, a land supply for residential development purposes of approximately 46,500 gross acres in addition to land which is already developed for that purpose. ... On this basis, the Study Area will require a supply of approximately 33,800 gross acres for industrial development, in addition to land already being used for industrial purposes, by the year 2020. 14

Secondly, the consultants outlined the physical constraints that would have to be considered in designating land to meet the required quantities. The chief constraints include the North Saskatchewan River corridor and its tributary ravines, a number of lakes and peripheral marshes in the rural-urban fringe area, transportation facilities such as major highways-rail routes-the Edmonton International Airport, unique land uses such as the Namao Canadian Forces Base-Elk Island National Park-Stony Plain Indian Reserve, and various locales or rural residential development (see Figure 15 ¹⁵).

Finally, in accordance with the boundary restrictions of the two scenarios, probable growth patterns were prognosticated.

Under the status quo or multi-municipal scenario, the Mackenzie-Spencer consultants concluded that growth or development would proceed in the following fashion. Primarily, the status quo situation would facilitate the expansion of existing or



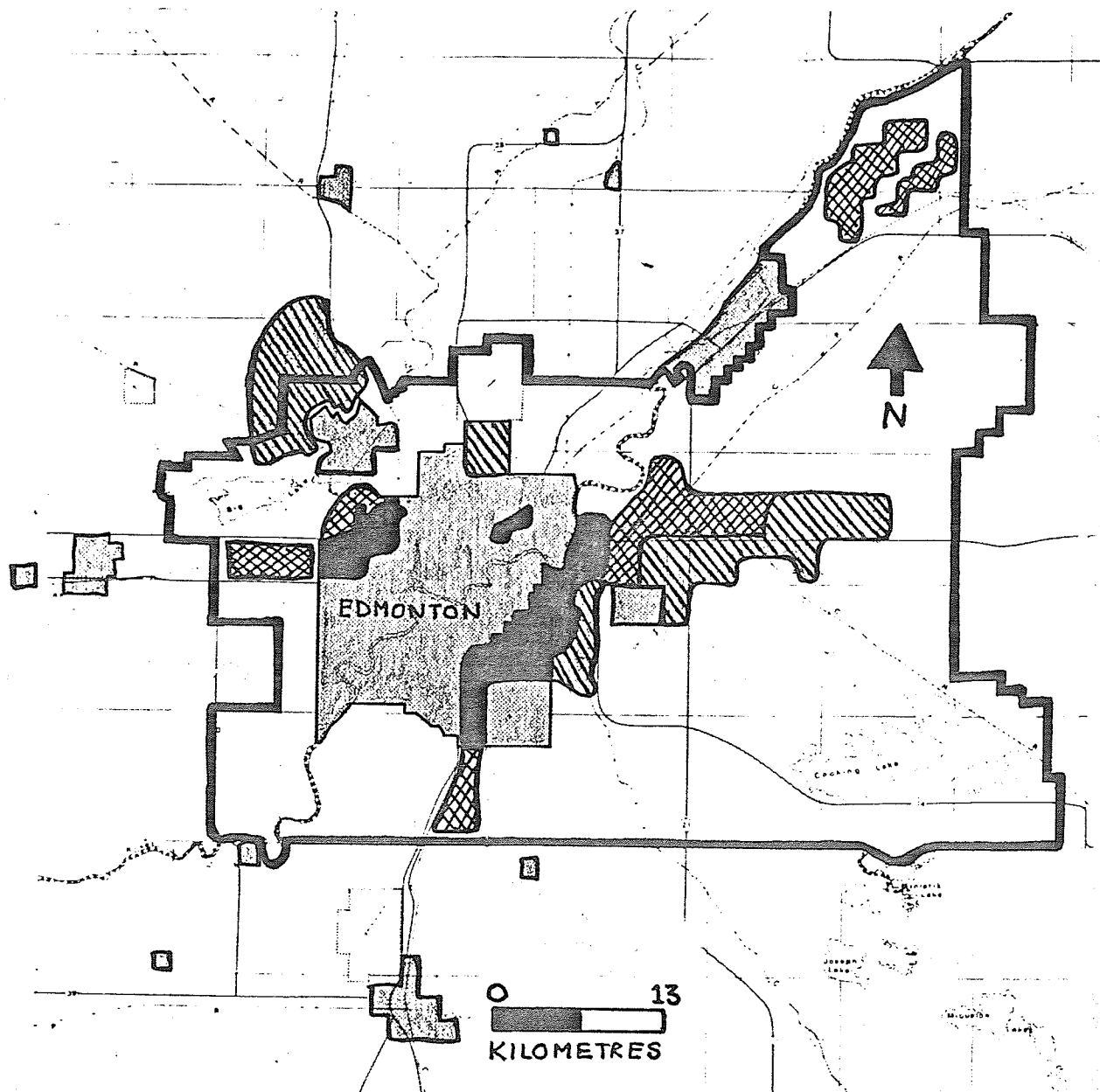
- URBAN SETTLEMENTS
- ▬ PROPOSED HORIZON 21 UNI-MUNICIPALITY BOUNDARIES
- NORTH SASKATCHEWAN RIVER VALLEY
- MAJOR REGIONAL TRANSPORTATION ROUTES
- ++++ MAJOR RAILWAY ROUTES
- LAKES
- ▨ RURAL RESIDENTIAL DEVELOPMENT
- ▧ INDUSTRIAL DEVELOPMENT
- ① CANADIAN FORCES BASE (NMAO)
- ② STONY PLAIN INDIAN RESERVE
- ③ EDMONTON INTERNATIONAL AIRPORT
- ④ ELK ISLAND NATIONAL PARK

FIGURE 15 - LAND DEVELOPMENT CONSTRAINTS - EDMONTON METROPOLITAN REGION

established land use areas. As a result of the restricted City of Edmonton boundary, the supply of vacant land would not be adequate to accommodate the expected residential and industrial requirements. Consequently, residential and industrial development would be forced to locate in other established areas that are not contiguous to the built-up Edmonton area. The research study provides this overall perspective of the development or growth pattern that would evolve under multi-municipal administration (see Figure 16¹⁶):

In summary, the status quo pattern would evolve primarily as a consequence of constraining Edmonton's logical and natural residential expansion areas. The result would be the evolution of two large and ungainly dormitory appendages immediately adjacent to the central City of Edmonton. In effect, these two large dormitories would grow by default as a consequence of being required to accommodate the inevitable population growth of the inner metropolitan area, a large portion of which would have been accommodated in Edmonton had sufficient land been available for that purpose.¹⁷

Under the Horizon 21 or uni-municipal scenario, the consultants concluded that growth or development would proceed in the following manner. As a result of an extended City of Edmonton boundary, and the concomitant effect of an increased supply of vacant land; growth would be more "compact" and contiguous to the built-up Edmonton area. There would be no necessity to accommodate growth demands by expanding in non-contiguous locales. Overall, growth would be distributed to a number of areas on the periphery of the city. This would ensure a more balanced and logical growth pattern within the metropolitan region. Specifically, the Horizon 21 scenario growth pattern would have these features.



- PROPOSED HORIZON 21 UNI-MUNICIPALITY BOUNDARIES
- EXISTING URBAN DEVELOPMENT
- ▨ FUTURE URBAN DEVELOPMENT
- EXISTING INDUSTRIAL DEVELOPMENT
- ▩ FUTURE INDUSTRIAL DEVELOPMENT

FIGURE 16 - PROBABLE GROWTH/LAND DEVELOPMENT PATTERN OF STATUS QUO SCENARIO (MULTI-MUNICIPAL ADMINISTRATION)

In the City of Edmonton established residential growth areas would infill and the numerous areas of land which are suitable for residential development and adjacent to existing areas would develop as required. ... There also would be no need to develop isolated dormitories without any portion of the Area. 18

Figure 17¹⁹ illustrates the growth pattern that would probably evolve under the Horizon 21 scenario.

c. Relationship of Scenarios/Growth Patterns To Orderly

Land Use Planning of Metropolitan Region

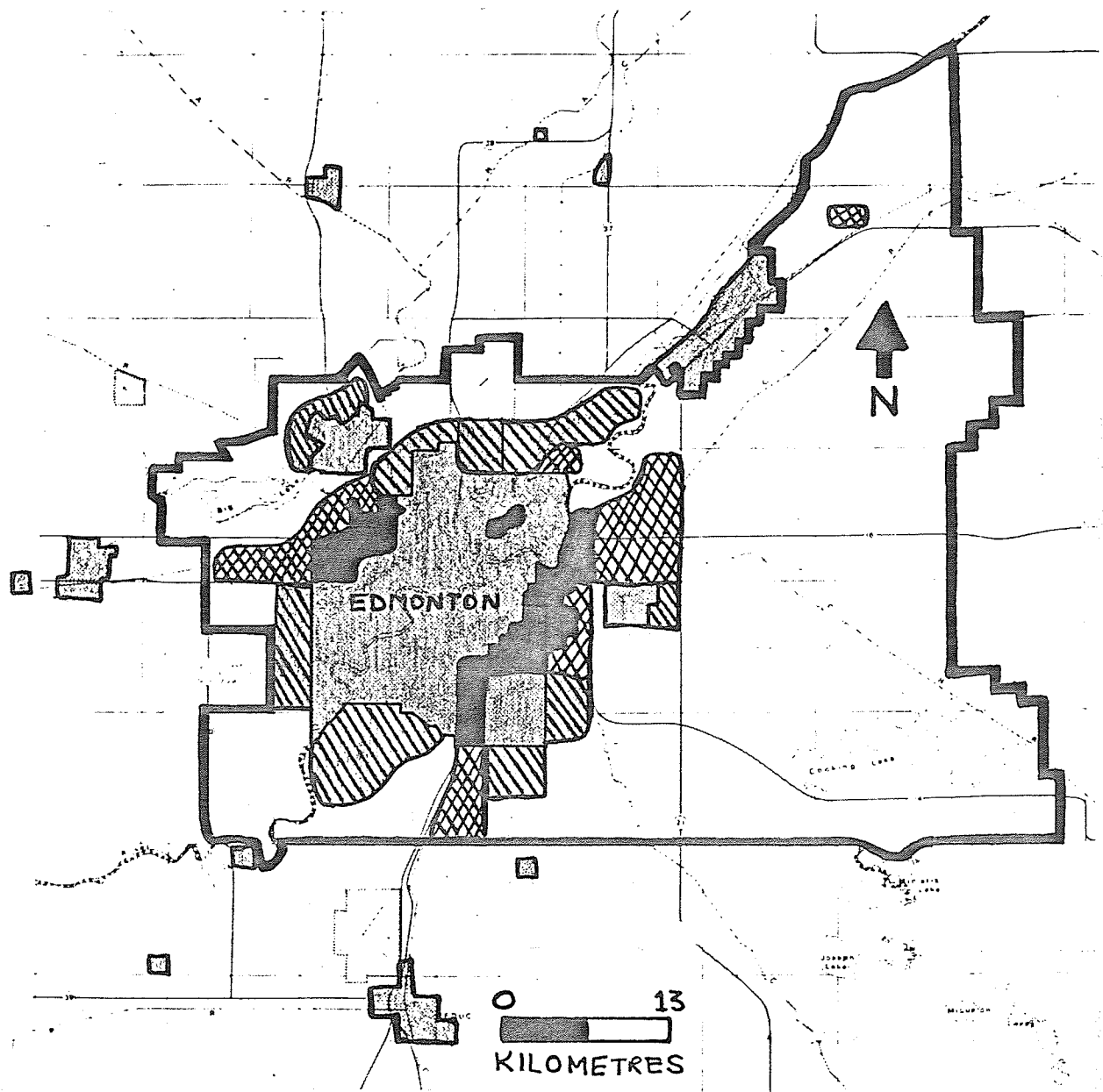
With respect to achieving orderly land use planning, it seems that the Horizon 21 scenario, or the quasi-strategy of uni-municipal administration; is more advantageous than the status quo scenario, or multi-municipal administration. A number of consulting reports, and especially, the Mackenzie-Spencer planning analysis support this contention with some significant research conclusions.

A strategy of orderly land use planning for a metropolitan region was presented in Chapter IV (see Figure 3). This strategy features four procedural or sequential phases that are demonstrative of the generic principles of regional planning.

i. Phase One

Phase One of this strategy features the identification of existing land uses in the rural-urban fringe area that require protected status. The strategy identifies eight prominent land uses that require protected status:

- agricultural activities that utilize small parcels of land
- mineral deposits sites
- recreational terrain and ecological areas
- rural residential areas



- PROPOSED HORIZON 21 UNI-MUNICIPALITY BOUNDARIES
- EXISTING URBAN DEVELOPMENT
- ▨ FUTURE URBAN DEVELOPMENT
- EXISTING INDUSTRIAL DEVELOPMENT
- ▩ FUTURE INDUSTRIAL DEVELOPMENT

FIGURE 17 - PROBABLE GROWTH/LAND DEVELOPMENT PATTERN OF HORIZON 21 SCENARIO (UNI-MUNICIPAL ADMINISTRATION)

- landfill sites
- highway corridor and associated commercial uses
- heavy industrial uses
- agricultural activities utilizing large parcels of land

As previously mentioned, agricultural activities that utilize small parcels of land require protection for two main reasons. First, the products of these activities (such as dairying or market gardening) are highly perishable, and more susceptible to damage if delivered to the built-up area from distant locales. Therefore, their locations within the rural-urban fringe area require protection.

Secondly, these activities require protection because they generate significant economic impact for the region in the form of income and employment opportunities. Accordingly, these activities are important to the health of the total regional economy. Under multi-municipal administration, it is conceivable that a parochial municipality will disregard the "regional" necessity of protecting such small parcels. As a result of converting such parcels for their own immediate and localized gain, parochial municipalities will merely further the difficulties encountered by the overall region. Under uni-municipal administration, protection of the regional interest is facilitated.

The identical principle applies to the protection of mineral deposits sites. Mineral deposits sites require protection for a number of reasons. Perhaps most importantly, mineral deposits sites with proximity to the built-up area require protection to ensure that the associated costs of

acquiring minerals are kept as minimal as possible. Yet, the chances are that mineral deposits sites will be converted by a parochial municipality with development policies that do not recognize the regional necessity of protecting such sites. Under uni-municipal administration, the regional concern of protecting such sites would be a priority.

Recreational terrain and ecological areas require protection in the rural-urban fringe area because open space in the built-up areas do not adequately facilitate the demand of metropolitan residents for "recreational escape." As well, diminishing energy reserves will mean decreased travel to distant recreational areas in the future, and the accompanying demand for recreational areas that are proximate to the built-up area.

Since recreational and ecological areas transcend municipal political boundaries, the protection of regional open space and natural areas would seem more feasible under uni-municipal administration. A uni-municipal administration supports the planning of a recreational and ecological land protection program on a more rational and hierarchical basis than multi-municipal administration. Under the latter, parochial municipalities would have a tendency to protect small quantities of recreational land with the collective result being an uncoordinated, haphazard proliferation of local open spaces.

Under uni-municipal administration, hierarchical protection of recreational land could be implemented with the collective

result being a coordinated, rational system of larger regional parks that are supplemented by a logical number of local or secondary open spaces.

Rural residential areas require protection for the essential purpose of preventing any further expansion of such a land use. Expansion of rural residential areas tends to have the effect of exacerbating the numerous problems that are associated with rural residences. Under uni-municipal administration, the protection of such areas are more likely to be promoted so as to prevent these problems from increasing in intensity.

Some examples of these problems include land fragmentation into uneconomical land parcels, conversion of recreational land and agricultural holdings, and interference with land designated for future growth or development. These problems are very deleterious for promoting orderly regional growth; an objective that a "regional" oriented uni-municipality would prioritize. Consequently, a uni-municipal administration should be more inclined to protect rural residential areas from expanding.

Under multi-municipal administration, it is quite probable that the principle of rural residential protection would not be promoted if past performance is accepted as significant evidence. According to the Edmonton Regional Planning Commission, rural residential fragmentation of the rural-urban fringe area of Edmonton has occurred with the following repercussions. A Citizens' Report states,

... that the regional municipal jurisdictions and the ERPC have been unable to resist pressures leading to land fragmentation in their areas. ... An analysis of agricultural land use within a 15 km distance of the core city's boundaries by McKinnon-Allen, 1979, shows that the County of Parkland has fragmented 41% of its Canada Land Inventory classes 1, 2 and 3 lands. In the County of Strathcona, the comparable figure is 26%, even though the County's general land plan states that fragmentation by rural residences on CLI soils Classes #1,2, and 3 is not allowed. 20

As landfill sites are currently provided on a regional priority system, the uni-municipal strategy is only more advantageous than multi-municipal administration with respect to the development of any new sites; and it has been announced that current sites are of adequate capacity to accommodate future growth demands. 21

Highway corridor and associated commercial uses require protection for the same reason as rural residential development (i.e. expansion would only encourage or intensify the problems associated with such highway-commercial land uses.) Under uni-municipal administration, the protection of these uses would be a prioritized regional concern; while under multi-municipal administration, it is probable that highway-commercial uses would expand with the consequence being the intensification of various land use problems.

Existing heavy industrial sites require protection from other sensitive land uses that would create incompatible environmental situations. As industrial sites represent land that has been converted, their protection seems guaranteed under either of the scenarios and their respective growth patterns.

Agricultural activities that utilize large parcels of land require protection for one primary factor: to provide the

metropolitan region with large parcels of reserve land for future urban uses. However, this reserve land should be protected with two concerns being emphasized. The activity of agricultural production will remain more viable as an economic activity if less land is utilized for urban uses; and secondly, if the less productive land is developed. Less productive land has two perspectives; land that features low soil quality, and secondly, land that is subdivided into a proliferation of uneconomical parcels or is too proximate to sensitive incompatible land uses.

It would seem that the multi-municipal pattern would utilize more agricultural land than the uni-municipal strategy.

Since the status quo pattern requires the outward extension of existing dormitory communities to accommodate residential growth, this pattern results in the consumption of more prime agricultural land beyond the present influence of urbanization than would be consumed under the proposed pattern. ... The status quo pattern would expose more agricultural areas currently located beyond the influence of urbanization to the potentially adverse influences of urban activity, a basic consequence of the sprawl evident in the pattern. In comparison, the compact nature of the proposed pattern would minimize the frontier of urbanization with respect to surrounding agricultural areas. 22

With respect to less productive land, the uni-municipal strategy can be considered as more advantageous than the multi-municipal pattern. For instance, the Capital City Citizens' Report indicates that the uni-municipal or Horizon 21 scenario would be more inclined to utilize agricultural land of lower productivity potential, as compared to the current boundaries; which encourage the infiltration of prime agricultural land for the purposes of urban development. 23

In addition, the Mackenzie-Spencer study outlines the advantages of uni-municipal administration for utilizing less

productive land that is characterized by constraints such as an uneconomical number of parcels or adjacent incompatible land uses.

There exist, at the present time, several areas of land adjacent to Edmonton which, although they may feature high quality soils, are limited in their agricultural potential by haphazard subdivision, incursion of incompatible uses or proximity to adverse influences emanating from adjacent urban areas. These areas would not develop for residential purposes under the status quo pattern while they would be developed under the proposed pattern. 24

ii. Phase Two

Phase Two of the orderly land use planning strategy involves an analysis of regional trends. Because of the analytical or research orientation of this phase, it is not effected by either of the two scenarios or strategies.

iii. Phase Three

Phase Three of the strategy features the designation of reserve land in the rural-urban fringe area for conversion into new urban uses. The most prominent land uses are contiguous high-density residential development and new industrial or commercial (shopping centre) activities. For a number of reasons, the uni-municipal strategy is considered as a more advantageous strategy.

To begin with, the uni-municipal strategy would provide uniform control over the rural-urban fringe area. This type of control would substantially reduce the trends of residential "snob" zoning and industrial competition that exist under multi-municipal administration.

With multi-municipal administration, parochial municipalities engage in "snob" zoning, which prevents a variety of residential

densities within a particular district. The consequence for municipalities with less political influence is an abundance of lower income housing, and the overall regional effect of social segregation. Mackenzie-Spencer offer a commentary on the advantages of uni-municipal administration for preventing "snob" zoning.

The status quo pattern can be expected to feature, in the two large concentrations of suburban dormitory development, the same degree of socio-economic homogeneity which characterizes St. Albert and Sherwood Park today. ... The proposed pattern, in comparison, would feature a larger number of residential growth areas each of which would contain a range of housing types catering to a broad range of lifestyles and financial means. 25

Under uni-municipal administration, the negative land development ramifications that accompany multi-municipal industrial competition would be virtually eliminated. The uni-municipal scenario would ensure logical growth patterns due to the promotion of rational and coordinated industrial development.

Secondly, the uni-municipal strategy would ensure an adequate supply of reserve land for future development purposes; a supply that would provide a desirable level of competition with respect to the price of vacant land. In contrast, the multi-municipal strategy would restrict the supply of land; a situation that encourages oligopolistic control of land and the concomitant effect of higher land prices.

Thirdly, in designating land for future growth purposes, the uni-municipal strategy would be more advantageous with respect to promoting the development of the city in a compact form. The multi-municipal strategy would designate non-contiguous land and encourage urban sprawl development such as suburban expansion,

while the uni-municipal strategy would achieve compact growth.

Retention of the City's present boundary would severely limit residential growth in Edmonton by denying the City the areas into which it could expand naturally and logically. ... The proposed pattern, in comparison, would be the consequence of the natural evolution of the established pattern of development in the inner metropolitan area. It would be the result of gradual peripheral expansion in modest increments in several directions and it would achieve a highly desirable degree of compactness. 26

There are three prominent advantages to the compact form of growth. The first is that the uni-municipal strategy would ensure that servicing infrastructure could be provided at less expense than the multi-municipal strategy. The non-contiguous growth pattern of the multi-municipal strategy would necessitate the expenditure of more capital for transporting water and extending sewers to further distances.

The second advantage occurs when it is recognized that the compact growth pattern would ensure greater accessibility to the recreational opportunities of the North Saskatchewan River valley, and therefore, there would be less of a requirement to acquire expensive parkland to serve the non-contiguous growth areas that would be apparent under multi-municipal administration.

The final advantage is that the compact pattern would eliminate the necessity of constructing capital facilities to service the non-contiguous areas that would be apparent under multi-municipal administration. Under uni-municipal administration, existing facilities can be utilized, and the expense of constructing new facilities is avoided.

iv. Phase Four

The fourth phase of the orderly land use planning strategy

is the designation of regional transportation requirements. The purpose of this phase is to link the protected land uses identified in the first phase, and the designated land uses of the third phase, with a coordinated regional transportation system.

From the outset, it is quite apparent that the multi-municipal strategy is responsible for a number of regional transportation planning problems.

There is a lack of coordination in planning and implementation of road system elements in the urban region due to the number of jurisdictions and the consequent variability in priorities and funding allocations. ... There is a lack of continuity in roadway standard and operation on specific roadway routes that have a continuous regional function in the urbanized area due to the multiplicity of jurisdictions and priorities. 27

Consequently, it is not surprising that the uni-municipal strategy is considered as a more advantageous alternative by the Underwood-McLellan Consulting group for the promotion of efficient regional transportation planning. Also, the Mackenzie-Spencer report outlined a number of advantages that a compact uni-municipal growth pattern would have for designating transportation requirements.

Firstly, most municipal corporations are characterized by a scarcity of financial resources. Consequently, the less impact a transportation system has on a municipality's capital and operating budgets, the less strain there will be on municipal coffers. Accordingly, it is the compact uni-municipal growth pattern that features a transportation system with less capital and operating costs.

Secondly, it is a universal principle of land use planning

to separate residential and employment nodes. In pursuit of this principle, it is desirable to minimize the length of travel between the two separate land uses. As the following excerpt describes, the uni-municipal strategy is more advantageous for achieving this principle.

The status quo pattern ... tends to concentrate residential growth at locations which possess limited or minimal convenient access to employment areas. ... This pattern features, therefore, a relatively poor functional inter-relationship between new residential growth areas and employment locations. ... By way of comparison, the proposed pattern would result in smaller nodules of residential development being distributed evenly around the City. The distribution of these growth areas would result in new residents being located more conveniently with respect to both the established and expanding industrial areas and the major transportation facilities that will convey them to and from their work place. 28

Thirdly, the uni-municipal growth pattern would be more accessible to centralized regional facilities, and due to its balanced distribution; it would not create a demand for improved access routes as the unbalanced growth pattern of multi-municipal administration would.

Fourthly, the balanced and compact growth pattern of the uni-municipality strategy would ensure more direct and reverse-flow utilization of transportation facilities. This would not necessitate any increase in roadway capacity. In comparison, the multi-municipal strategy would encourage less reciprocal utilization of transportation corridors, and therefore, the need to provide costly improvements to increase roadway capacity. 29

Finally, the uni-municipal growth pattern would not encourage any demand for one-directional linkages that would be necessitated under the multi-municipal strategy: linkages to the central city that could disrupt existing neighbourhoods.

In concluding this chapter, it is evident from the foregoing that the uni-municipal strategy would seem to have a number of advantages over multi-municipal administration with respect to achieving orderly land use planning of a metropolitan region.

C. Summary

This chapter primarily involved a description of the City of Edmonton Horizon 21 annexation scheme. The case study commenced with an examination of recent attempts by the City of Edmonton to annex its metropolitan region land. This was followed by a discussion of the Horizon 21 scheme with respect to non-planning reasons for its establishment, its land jurisdiction, why it only represents a quasi-example of a uni-municipality strategy, and a political analysis of its particular proposed boundaries.

The final section of the case study involved a comparison of the proposed Horizon 21 scheme and growth pattern scenario (uni-municipal strategy) with the status quo pattern of growth (multi-municipal strategy), to determine which strategy was more advantageous for achieving orderly land use planning of the metropolitan region. By comparing both scenarios with the four specific phases of the orderly land use planning strategy for metropolitan regions, all the evidence seemed to confirm that the uni-municipality strategy represents the most appropriate approach because of the advantages that it has over multi-municipal administration.

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 26. Ibid., p. 50.
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CHAPTER VII

CONCLUSION

The research objective of this thesis was to examine the uni-municipality of administering metropolitan regions to consider if it was a more advantageous alternative than multi-municipal administration for achieving orderly land use planning of a metropolitan region.

This objective was investigated by following a five phase research procedure.

The first phase (Chapter II) discussed the geographical evolution of metropolitan regions with respect to the hierarchy of central places concept. The chapter concentrated on describing the various components of urban-to-rural invasion that are responsible for the emergence of metropolitan regions as geographical phenomena. This phase concluded with a description of the unique land zones of a metropolitan region that are apparent after urban-to-rural invasion.

The second phase (Chapter III) featured a description of the prominent land use problems of the rural-urban fringe area of metropolitan regions. Although these problems are physically isolated in the rural-urban fringe area, they are of primary concern if orderly land use planning of the metropolitan region is to be achieved.

The third phase (Chapter IV) presented a "model" land use planning strategy that is similiar in substantive content to the official plans that regional planning structures attempt to

implement in Canadian metropolitan regions. The stated objectives of the strategy are to promote rational and orderly growth of a metropolitan region, and secondly, to prevent the land use problems of the rural-urban fringe area from recurring, or increasing in intensity.

The fourth phase (Chapter V) discussed why such a substantive strategy of orderly land use planning (as described in Chapter IV) has not been implemented with any significant success in Canadian metropolitan regions. With respect to the administration of metropolitan regions, provincial governments are generally opposed to disrupting the status quo (i.e. altering existing municipal boundaries). As a result, metropolitan regions remain administered by multi-municipal strategies: an anachronistic approach that prevents the implementation of orderly land use planning. Case studies of four Canadian metropolitan regions document this situation.

The final phase (Chapter VI) discussed the alternative jurisdictional strategy of uni-municipal administration with respect to the potential advantages that it has over multi-municipal administration for achieving orderly land use planning of a metropolitan region. The advantages are documented with a case study of the City of Edmonton "Horizon 21" annexation proposal: a quasi-attempt to introduce a uni-municipal jurisdictional strategy within the Edmonton metropolitan region.

As a result of completing this research procedure, and of most significance; a case study of the proposed City of Edmonton quasi-example of a uni-municipality, it can be concluded that the uni-municipality jurisdictional strategy seems to be more appropriate

than multi-municipal administration for achieving orderly land use planning in metropolitan regions. Although the Horizon 21 long-term planning analysis indicated specific or local advantages of uni-municipal administration for the Edmonton metropolitan region, these advantages merit restating due to their general applicability for any Canadian metropolitan region.

- The uni-municipal strategy would facilitate the protection of "regional" valued land uses in the rural-urban fringe area to a greater degree than multi-municipal administration. Examples include scarce mineral deposits sites or parkland resources that transcend political boundaries.
- Some land uses need to be provided within a metropolitan region on a hierarchical basis or priority system (such as landfill sites). The uni-municipality strategy facilitates this necessity for hierarchical land use locating, while the multi-municipal strategy encourages parochial and localized locating of land uses.
- A component of orderly land use planning of a metropolitan region is the requirement of designating large parcels of agricultural land as reserves for future urban uses. In designating such parcels, the uni-municipal strategy is more advantageous in that less land needs to be reserved, and secondly, the least desirable land with respect to agricultural productivity is utilized.
- The uni-municipal strategy promotes more rational or logical growth of the region due to the elimination of "snob" zoning and industrial competition practices that are associated

with multi-municipal administration.

- The uni-municipality strategy ensures an ample quantity of reserve land which creates a more competitive situation with respect to land pricing.
- The uni-municipality strategy virtually guarantees a compact and contiguous growth pattern. The compact type of growth ensures less expense in the provision of services, and proximity or accessibility to existing amenities and centralized facilities.
- The uni-municipality strategy has these important advantages with respect to designating or providing transportation requirements: less operating costs, the distance travelled between separated land uses is minimized, more two-directional utilization of existing facilities is encouraged, and there is less demand for capital improvements to increase the capacity of the existing system.

In concluding this thesis, a final consideration should be acknowledged. As a result of these various advantages, the uni-municipality strategy would probably be more effective than multi-municipal administration for achieving orderly land use planning of a metropolitan region. However, this conclusion is not enough to justify a recommendation for immediate establishment of the uni-municipality strategy in Canadian metropolitan regions. From an orderly land use planning perspective, the uni-municipality strategy seems to be more appropriate than multi-municipal administration.

However, land use planning is only one principle or

requirement of local government. Other principles or requirements of local government that were not considered in this thesis include accountability, accessibility and efficiency. Consequently, before the uni-municipality strategy could be established in Canadian metropolitan regions, it would have to be assessed with respect to these other principles or requirements of local government.

APPENDIX

As discussed in Chapter VI, the author considered the Comay Planning Consultants demarcation of the Edmonton metropolitan region to be relatively accurate because it was indicative of the four criteria that define a metropolitan region within the context of this thesis.

Unfortunately, the Comay Planning Consultants firm did not indicate the particular procedures that were employed to determine their unique configuration of the Edmonton metropolitan region.

This author is assuming that the Comay firm probably utilized a set of procedures that would be comparable to the criteria employed by Brian J. L. Berry (i.e. the specific criteria of his Daily Urban System, or DUS method of demarcating metropolitan regions).

As outlined in Chapter VI, the purpose of this Appendix section is to explain such a set of procedures (i.e. Berry's DUS criteria), that were probably utilized by the Comay firm to demarcate the metropolitan region.

Initially, it should be emphasized that Berry's DUS method simply represents a unique way of demarcating metropolitan regions. It is based upon the following criteria.

The DUS method is primarily based upon the delimitation of boundaries for commuting patterns, which reflects the increased separation of residential and employment nodes within urban regions.

The initial phase of demarcating a DUS is to identify the economic centre.

The second phase is to determine the peripheral land that should be allocated to the DUS. The quantity of peripheral land to be encompassed in a DUS is determined by such techniques as journey to work pattern around the economic centres, road network connections to peripheral land; and by such economic indicators as telephone connections, bank deposits, television-radio service areas, and newspaper circulation.

In light of these criteria, Berry also considers the constraints of natural landforms or topography with respect to determining the DUS.

If two proximate economic centres create an overlapping of commuting patterns, Berry mentions that both economic centres would be classified as one DUS. (In the case of Edmonton, this would not be apparent as Edmonton is spatially isolated from economical centres of comparable hierarchical status.)

Upon demarcation of the DUS, Berry indicates that the DUS would have the following significant characteristics.

1. A DUS has a relatively high degree of "closure," or comparable land mass, with respect to residential and employment markets.
2. A DUS contains the land mass that will most likely be utilized for commuting in the future.
3. A DUS specializes in the production of goods and services; for the purpose of taking advantage of lower costs of production that result from the availability of resources and locational benefits.

4. A DUS provides the goods and services that are required by the residential and business sectors.
5. A DUS features industries, retail and wholesale activities, and services; which have products that need to be consumed within proximity of the economic centre as a result of transportation difficulties.
6. A DUS has a basic minimum population of 50,000, but comparable to the broad metropolitan region concept; a DUS can be categorized in accordance with population differences.

Information from: Brian J.L. Berry, Growth Centers In The American Urban System Volume I (Cambridge: Ballinger Publishing Company, 1973). Refer to pages 10-17, "A Unit For Analysis: The Daily Urban System."

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