

## **Population and Housing Projections for the Second Shift of Maple Leaf Pork Operation**

On September 12, 2006, Maple Leaf Pork announced a planned start-up of a full second shift of operation at the Brandon facility. A second shift will require 814 additional employees when fully operational. Phase 1 of a second shift will begin in summer 2007.

Prior to ramp up of the second shift, 67 new immigrants will arrive in July of 2007 to cover attrition at the plant. These cannot be accurately accounted for in housing in that it is not known whether employees who leave Maple Leaf are staying in Brandon for other employment, or whether they are leaving Brandon and thus freeing up housing. This is complicated by the fact that attrition occurs primarily among resident Canadians who have no employment restrictions.

Projections for new immigrant employees include 134 new employees (immigrants) in June 2007, 67 in July 2007, 60 in August 2007, 60 in September 2007 and 60 in October 2007. In 2008, an additional 150 immigrants will arrive in March, and 300 in September. A final 50 new residents will arrive in March of 2009. Total new immigrant residents, therefore is 814 when the second shift is completely staffed (this does not include attrition).

Any remaining employees required will be drawn from the resident population or further immigration as needed. This major increase in population, primarily inside the City of Brandon, will require a major effort to provide adequate housing, not only for Maple Leaf employees, but also for the expected secondary employment and population increase anticipated, owing to expansion at Maple Leaf.

### **Background**

Between 1998 and 2000, original impact projections were produced using a sophisticated and complex model based on the Microcomputer Economic and Demographic Assessment Model (MEDAM) devised at North Dakota State University. The original projections were used to plan all aspects of the economic impact of the plant, including population change divided into direct Maple Leaf employment and secondary employment, agricultural inputs, housing needs, and impact on infrastructure and services. MEDAM was designed to assess economic impact for a new industry entering a region. It is not appropriate for re-analysis because many of the inputs are already in place, and an unknown share of the secondary (induced employment and growth) has occurred or is on-going.

Brandon's population and housing situation is complicated by the arrival of other major employers during the development and operations of Maple Leaf between 1998- 2006. The move of 2PPCLI to Shilo, the addition of Convergys and expansion of existing businesses all have added to the growth and development of the City. Much of this would be in addition to, rather than directly caused by the Maple Leaf development.

Accordingly, it now is impossible to precisely isolate the impacts caused solely by Maple Leaf.

The original population projections relating to Maple Leaf’s start-up and first shift operation for the City of Brandon estimated substantial overall increase. Based on these projections (Rounds and Associates 2000), Maple Leaf’s first shift would increase the City’s population by 821 through direct employment, and 2,441 through secondary (induced) employment, for a total of 3,262 persons. This excludes construction employment because the plant was operational, and persons choosing to reside outside of Brandon. More of the original first shift workforce than anticipated was drawn from outside of the Brandon region, which increases population growth estimates. An important point to remember is that secondary employment and population growth occur over several years, not immediately. For this reason, the 2002 projections are used for reference (Table 1).

**Table 1**  
**Population Projections Ascribed to Maple Leaf Operations and Secondary Development for the City of Brandon, 2002**

<b>Operational Pop.</b>	<b>Secondary Pop.</b>	<b>Total Pop.</b>
<b>821</b>	<b>2441</b>	<b>3262</b>

The second shift at Maple Leaf was originally scheduled to begin in 2003. The 2004 projections for Maple Leaf and secondary population growth showed a substantial increase for Brandon’s population, primarily because virtually the entire second shift workforce (primarily immigrants) and much of the secondary employment generated would require “new” residents. The major impact of Maple Leaf, therefore, will be realized when a second shift is instituted and secondary growth has had a few years to develop. The 2004 projection now can be used and adjusted to estimate second shift impacts for 2007-2010. The first shift populations have been subtracted from these estimates, so numbers reflect the projected increase from the current population.

**Table 2**  
**Population Projections Ascribed to Maple Leaf Second Shift and Secondary Development for the City of Brandon for 2010 Onward**

<b>Operational Pop.</b>	<b>Secondary Pop.</b>	<b>Total Pop.</b>
<b>2410</b>	<b>5615</b>	<b>8025</b>
<b>Reduced 15% 2050</b>	<b>4770</b>	<b>6820</b>
<b>Reduced 19% 1661</b>	<b>3864</b>	<b>5525</b>

In essence the second shift at Maple Leaf may have about 1.7 times the impact of the first shift based on original projections. These numbers include a reduction based on the fact that Maple Leaf’s first shift is about 15% greater than the original estimate, and a further 19% reduction based on the 814 second shift employees instead of the original 1000. This, of course, would reduce the second shift impacts because some has already been

realized, and the number of new second shift employees has been reduced. The final estimate, therefore, would be **a population increase of about 5,525 persons** once all secondary development has occurred (Table 2).

The most immediate need relating to the 2<sup>nd</sup> shift expansion and secondary development will be adequate housing for the anticipated population increase. Housing has been a major issue for the last eight years, and this trend will continue. The highly varied population anticipated will require all forms of housing. An increase in any segment of the work force will generate widely diversified secondary employment, and thus further demand for housing at all levels.

### **Housing in Brandon 1998-2006**

Monitoring of housing demand and supply in the City of Brandon has been on-going since 1998. The most recent update (May 2005; Rounds and Associates) listed two major conclusions:

1. The projected demand (updated in 2002) for 2004 was 479 single family dwellings, including Maple Leaf's first shift, induced growth owing to Maple Leaf's first shift and the relocation of 2PPCLI to Shilo. An active real estate market and new construction through 2004 had met and exceeded the 2002 projected demand (n=502). The fact that the pace of development of new owned housing has not declined (169 new dwellings in 2005, and 133 in 2006), and a continuing active real estate market suggests that growth has occurred beyond the expected impact of Maple Leaf. The fact that other major employers have located in Brandon, and an expanding seniors population, explain the continuing trends. Single family dwellings include houses, mobiles and RTMs.
2. Rental housing has been monitored more closely, with a 2002 projection for the need for 748 additional rental units from 2005 onward. Changes in the real estate market and new construction through 2004 left a latent demand for 160 units. Permits were issued for 76 multiple family units in 2005, reducing the latent demand to 84 units). The permits for 67 multiple family units in 2006 effectively eliminated the projected latent demand. Vacancy rates (1% or less) in both the formal and informal rental markets in 2005 and 2006 suggest a continuing shortage of rental units. Any carry-over of demand should be added to projected increases in demand owing to a second shift of operation at Maple Leaf.

It is instructive to review the response of the private sector to the projected demand for housing when Maple Leaf announced and began operations in 1998/99 (Table 3). Between 1998 and 2006, 1,104 single family dwellings, 74 duplex units and 826 multi-family rental units have been added to Brandon's housing stock. Construction of new single family dwellings was strong in 1998, slowed for three years, and subsequently increased rapidly in 2002-2006. Approximately 650 new homes were built between 2002 and 2006.

Rental unit construction was high in 1999, 2002 and 2003, with 526 units constructed during the three years. Although reduced in number, an average of about 70 new rental units were constructed per year in the 2004-2006 period.

**Table 3  
Brandon Housing Permits Issued 1998-2006**

Year	SFD	Duplex units	Multi-family units	Total
1998	121	34	23	178
1999	48	8	250	306
2000	70	4	26	100
2001	60	6	45	111
2002	124	4	111	239
2003	150	4	165	319
2004	228	0	63	291
2005	170	8	76	254
2006	133	6	67	223
<b>Total</b>	<b>1,104</b>	<b>74</b>	<b>826</b>	<b>2004</b>

### **Future Housing in Brandon**

Owing to recent rapid growth in Brandon, including not only the impact of Maple Leaf, but also the relocation of 2PPCLI, the addition of Convergys and other new employers and expansion in other businesses, it is difficult to determine how much of the expected secondary development has actually occurred. It is likely that some of the expected induced development ascribed to a second shift at Maple Leaf has already occurred. Projecting future housing needs based on a second shift at Maple Leaf, therefore, requires establishment of basic assumptions. Fortunately, the records for 1998-2006 provide some indicators and suggest some assumptions for projecting future needs for housing.

#### **Background**

Original projections for housing needs based on a second shift at Maple Leaf and induced growth called for 2800 owned homes (all categories combined) and 2200 rental units (Rounds and Associates 2000). This projection was first made for 2004 and now serves as a target for 2007-2010 and beyond, depending on the time of start-up of the second shift at Maple Leaf and the rate of growth of induced development.

#### **Adjusting the Numbers**

Several adjustments can be made to the original housing projections. There is, however, a caveat in that the original numbers reflected only Maple Leaf and 2PPCLI housing demand. Other economic development has occurred and demand will not reflect increases

that cannot be attributed to initial projections. This means that final estimates probably will be on the low side of actual demand.

The first major adjustment is to reduce housing demand by realized supply increase between 1998-2006 (Table 4). Subtracting the total numbers of increased supply in Table 3 from the projected demand numbers in Table 4 allows initial determination of latent demand.

**Table 4**  
**Future Housing Demand in Brandon**

	Owned housing	Rental housing	Total
Original projection	2878	2218	5096
Built to date (2006)	1104	826	1947
Reduction 19%	337	45	382
<b>Latent demand</b>	<b>1437</b>	<b>1347</b>	<b>2784</b>

### **Direct Maple Leaf Impacts**

Latent demand is higher than that projected for the first shift at Maple Leaf. The primary reason for this is that all employees for the second shift will be new residents. First shift projections were based on the assumption that 90% of the employees would be Canadian residents, either from the City of Brandon or the commuter zone. The original first shift composition actually was 75% regional, somewhat lower than expected. This resulted in more “new” residents and a higher impact. Maple Leaf projects that virtually all second shift employees will not only be new to the region, but also immigrants to Canada.

Based on the expected demographics of the workforce at Maple Leaf, the direct impact of the 2<sup>nd</sup> shift labour force will be a population increase of 814 persons in 2007-2009. It is expected that all immigrant workers will require rental housing and will remain in rental housing for three years. Assuming four persons per rental unit (the established pattern), this creates an immediate demand for 205 new rental units. After two years, these employees are eligible to bring their families to Brandon and many would prefer owned housing at that time. Initially, therefore, 204 new rental units are needed during the next two years. These residents will rely on a healthy housing continuum and continued construction of moderately priced new housing to gain entry into owned housing.

This delayed demand for owned housing changes the timing of owned versus rental demand. This will be evident in 2008 as the Maple Leaf immigrant employees who have been in Brandon for two years will bring their families to the City and look to move from rental to owned housing. This will free-up some rental units, effectively reducing the rental demand. Based on the assumption that four employees currently occupy a rental, the 400 current workers who bring families to Brandon will free up 100 currently rented units (assuming owned homes are available). This effectively opens up rentals for 400 new second shift employees, reducing the demand by 100 units, but increasing the

demand for owned housing. If owned housing is not available, there will be continued pressure on rentals.

This scenario will again occur beginning in 2010, when second shift employees will be in a position to bring their families to Brandon. This fluctuation in demand between rental and owned housing will effect supply, and necessarily induce a degree of uncertainty in new construction. Overall demand, however, also depends on induced growth, which typically is realized over a longer period of time.

### **Induced Impacts**

Induced growth relating to the injection of \$10 of millions of new dollars into the local economy by Maple Leaf is very different from growth attributed directly to Maple Leaf operations. Secondary development is wide-ranging as all aspects of the economy expand differently among sectors. Accordingly, employment at all wage levels will increase, with a similar impact on housing at all levels. Based on the projected population and housing numbers, induced development will have a much greater impact on the City than Maple Leaf operations. This applies to the housing market and the general economy.

If all secondary growth occurred during the next three years, Brandon would suffer an acute housing shortage. Fortunately, secondary development often occurs over a longer period of time. This is evident in the flux between early rental developments and later owned housing that occurred between 1998-2006, as the first shift of Maple Leaf impacted the City. Although unpredictable, one can assume that on-going growth will mirror the present balance of the distribution of income within the City. Employment, therefore, will result in a balance in the low-middle-high income brackets that currently exists. Using this assumption, demand for housing should be a repeat of the 1998-2006 growth pattern, but the magnitude will be considerably higher the earlier growth period.

Based on these assumptions, the 100 new rental units needed for Maple Leaf employees eventually will become available for secondary development employees. The lesson learned from the last eight years, however, is that the housing supply has barely kept pace with demand. A similar pattern of housing development that occurred between 1998 and 2006 will have to occur beginning in 2007. That is, an initial rapid development of rental units to accommodate immediate demand followed by a lower level but steady increase in rental units over time. The immediate increase in demand for entry-level homes by first shift employees will occur in 2007. The housing continuum has functioned well, primarily because construction of new owned housing has increased dramatically to allow movement of families with all levels of income into and through the housing continuum.

Putting numbers on these demand fluxes is difficult. Assuming that secondary growth will be almost double the impact of direct Maple Leaf development, there will be the need for 285 new rental units (based on occupancy by two persons for non-Maple Leaf employees) in addition to the 100 for Maple Leaf employees. If secondary growth is triple that of direct growth, the demand increases to 700 total units. Over time, the

projected demand for 1350 rental units would be realized. If entry level owned properties are not available the demand for rental units not only may be more immediate, but also will remain high for prolonged periods of time.

Construction of new owned housing units also must increase to allow movement of families with all income levels through the housing continuum. The long-term demand for owned housing exceeds the need for rental housing, and is higher by half again the number built during the last eight years. Predicting the timing of this demand for Maple Leaf employees is based on experience and known expectation. It is much more difficult to predict the timing for induced growth. The recent rapid increase in mobile homes and RTMs probably reflects an affordability component for many families. Further development of lower cost housing may be essential to allow entry of many new residents and young persons into owned housing.

There are a finite number of older entry level homes in the City, and turnover of these properties is unpredictable. Based on the last four years, about 417 deaths occur among Brandon residents each year. The real estate market handled about 125 estate sales in 2004. Using these figures, an estimated 100-125 older owned properties may become available each year. Their average selling value in 2004 was \$88,000, permitting entry level affordability for both Maple Leaf and induced growth employees. If those who wish to leave rentals have options available the demand for rental construction will be slowed, and ultimately reduced.

### **Final Demand Estimates**

With the advent of Maple Leaf's second shift beginning in 2007 and being completed in 2009, there will be an immediate need for 200 new rental units. This number will be reduced by 100 units if first shift employees can find owned properties. Secondary development will begin in 2007 and continue over the next 10 years. Based on current trends, approximately 350-750 new rental units will be needed from 2007-2017. Movement out of rentals will be an on-going process throughout this period. The initial demand projection for 1350 new rental units is a long-term goal, but at least half of those units will be needed in the short term. **Development of 450-650 new rental units should be encouraged during the next five years.**

Demand for owned housing will increase over time. The private sector has responded to demand during the last eight years by building new homes and siting mobile homes. This allows up-scaling and makes older houses available. The demand for entry level owned housing has been, and will remain high. The availability of older housing stock is unpredictable which makes construction of mobile home parks and lower cost new homes (RTMs etc.) a viable option. The long-term projected demand for new housing is more than 1400 properties. **With the current rate of about 150-200 new homes per year, the goal would be reached in 10-15 years.** This may be adequate, but there are likely to be demand fluctuations through time. There is an immediate need for 300 entry level housing units to accommodate first shift employees at Maple Leaf. Although the housing market is tight, especially in some price range categories, the present mix of new owned

housing between traditional buildings, mobiles and RTMs should be maintained to allow as many options as possible to current and new residents.

### **Comments on Acceptable Low-income Housing**

Acceptable housing includes adequacy (in good repair), suitability (accommodates family size), and affordability (<30% household income). Although strides have been made in both social and low-income housing in Brandon, efforts to increase and maintain acceptable housing must be on-going. BNRC has spearheaded development of low income rental units and had considerable impact during the first shift housing impact of Maple Leaf and induced development. Hundreds of new low income rental units and hundreds of renovations to existing units were funded through various programs.

Most low income demand results from wages associated with induced development. Need for low income rentals will again increase as the second shift impact arrives between 2007-2010. Not only are more low income rentals needed, but also some of those currently operating will come off of rent controls during the same time period. About 125 current units will revert to market rents between 2006-2009. These units should be replaced and additional units added to the low income rental housing options available.

### **Comments on Potential Political Changes to Watch**

Senior governments currently are considering changes to regulations concerning immigration. Discussion includes the possibility of “fast-tracking” landed immigrant status from the current two years reducing the waiting period by six months. Should this occur, immigrant employees at Maple Leaf would be in a position to bring their families to Canada within 18 months of their arrival. This would shorten the timing of need for entry level owned housing, and shorten the length of time for the immediate need for rental units. This, however, involves only 100 of the projected need for rental units. This supply, if freed up after 18 months, would fulfill the induced growth need for rentals over the longer term, reducing the long-term pressure for additional rental units. Should these changes occur, they will not affect the projected demand during the next two years, but may affect the mid-term demand by about 20% (100 free units of 450 needed). If, however, an adequate supply of entry-level homes is not available, the two and three bedroom rental units will have to be used to house immigrant families. Because there are four immigrant employees for each rental unit, the demand for larger rental units could increase dramatically, as each current unit would spawn demand for four rental units to house families. Is it of paramount importance to monitor the balance between rental unit and owned housing availability over the next 2-4 years.