



**Small-Area Population
Forecasts for New
Brunswick with 2016
Census Data: Simplified
Model Report**

Project Title

POPULATION DYNAMICS FOR SMALL AREAS AND RURAL COMMUNITIES

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Research Team

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Partners

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Approval

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I Executive summary

In 2017, NB-IRDT published Paul Peters' report, *Small Area Population Forecasts for New Brunswick*,¹ which provides one of the first in-depth examinations of how the population of New Brunswick may change over the next few decades.

After the publication of the 2017 report, however, 2016 census data for the province became available, revealing an overall decline in population.² A shrinking population presents a challenge to provincial and economic growth and, as such, it is important to re-examine provincial population change, providing support for the province in addressing this issue. Using the methods employed by Peters (2017), this project uses the most recent available data to update his previous projections and to reassess the population forecasts for sub-provincial areas in New Brunswick.

Similar to Peters' earlier findings, this report predicts that Moncton and Fredericton will likely see population increases over the coming decades, whereas most other areas will experience decline or stasis. However, there are variations between the reports' forecasts for certain counties (such as Saint John). Overall, our updated projections are generally more pessimistic than those produced by Peters, possibly reflecting the sluggish economy that followed the 2008 recession. The differences between these reports' projections could reflect a cyclical population downturn that will eventually reverse itself, or they might indicate a departure from previous population trends, making earlier forecasts irrelevant.

This report contains new population forecasts that update and supplement earlier work. Research forthcoming in a separate study will address the descriptive reasons for the changes between the two sets of population projections, allowing for an assessment of whether the more recent projections reflect a longer-term trend in New Brunswick's population rates.

¹ Peters' report can be read online at http://www.unb.ca/fredericton/arts/nbirdt/_resources/pdfs/report-small-area-population-forecasts.pdf.

² Peters considered census data from 1991, 2001, and 2011, which showed a provincial population increase from 2001-2011. The results from the 2016 census, however, show a population decline from 2011-2016.

2 Key findings

- I. Population projections based on 2016 census data for New Brunswick differ in a few ways from projections based on 2011 census data.
- II. Both sets of projections show population increases in Fredericton and Moncton, with declines in the majority of other small areas.
- III. However, current population forecasts for Saint John County differ significantly from Peters' (2017) projections.
- IV. The updated, pessimistic population forecasts are consistent with the post-2008 lag in the provincial economy.
- V. These results either
 - a) reflect a cyclical population downturn that will eventually reverse itself, or
 - b) indicate a break from previous population trends, foreshadowing a future decline in population rates.

3 Methodology and data

3.1 Forecasting methods

Like Peters (2017), we implemented scenario-based modelling and constrained forecasting to produce simplified small-area regional models.³

3.1.1 Simplified small-area regional models

Simplified small-area regional models provide population forecasts that are based on two kinds of data: sub-regional population counts from multiple periods and independent population projections at the highest-level of geography (Province). Peters' projections (2017) were based on small-area population totals from 1991, 2001, and 2011. This report, however, takes its data from 1996, 2006, and 2016. In both reports, population projections are based on the population totals of the latter two years (i.e., 2001 and 2011, and 2006 and 2016), whereas the population totals of the first two years (1991 and 2001, and 1996 and 2006) are used to calculate potential rates of error and validate the projected models. Both reports use independent population projections developed by Statistics Canada (2010).

3.1.2 Population growth formula

The population growth formulas we use to forecast small-area population totals are based on previous work by Tom Wilson (2015). However, while Peters' report (2017) indicates that the Variable Share Growth (VSG) formula had the smallest margin of error, this report finds the Linear-Exponential (LIN_EXP) formula most accurate. Therefore, all forecasts taken directly from the earlier work were calculated using the VSG formula, whereas this report's updated forecasts are calculated using the LIN-EXP formula.⁴

3.1.3 Scenario-based modelling

The independent population projections use scenario-based modelling to provide multiple possible forecasts based on potential future scenarios, each of which accounts for different observed rates of change in categories such as fertility, life expectancy, and immigration in New Brunswick. This report incorporates the seven scenarios previously used by Peters (2017): one low-growth, one high-growth, and five medium-growth scenarios. Each scenario-based forecast reflects a different assumption about the patterns population components might follow—the high-growth scenario, for example, assumes that future rates of fertility will be high, whereas a low-growth scenario assumes they will be low, and so forth. The main difference between the five medium-growth scenarios is the period used for migration trends (e.g., the M1 scenario uses the 1991-2011 period). These scenarios allow simplified models to cover a range of assumptions regarding fertility, life expectancy, and immigration through constrained forecasting. Table 1 summarizes the independent projection scenario assumptions used by Statistics Canada.

³ For a thorough explanation of how these methods were originally chosen, see Peters (2017).

⁴ For more information on the formulas used by each report, see Peters (2017).

Table 1: Summary of constrained scenarios assumptions, Statistics Canada (2014)

| Scenario | Fertility | Life expectancy | Immigration | Migration trends |
|-------------|---------------------|--------------------------------------|----------------------------|------------------|
| Low | Low: TFR=1.53 | Low: 86.0 Male, 87.3 Female | Low: 5.0 (per 1,000) | 1991 – 2011 |
| M1 | Medium: TFR=1.67 | Medium: 87.6 Male, 89.2 Female | Medium: 7.5 (per 1,000) | 1991 – 2011 |
| M2 | Medium | Medium | Medium | 1991 – 2000 |
| M3 | Medium | Medium | Medium | 1999 – 2003 |
| M4 | Medium | Medium | Medium | 2004 – 2008 |
| M5 | Medium | Medium | Medium | 2009 – 2011 |
| High | High: TFR=1.88 | High: 89.9 Male, 91.1 Females | High: 9.0 (per 1,000) | 1991 – 2011 |

In determining the scenarios that best describe New Brunswick’s current situation and probable future population growth, we highlight assumptions about immigration to New Brunswick. In the low-growth scenario, it is assumed that the province will attract 5 immigrants per 1,000 population per year until 2036. The medium-growth scenarios assume a rate of 7.5 immigrants per 1,000 population, and the high-growth scenario assumes a rate of 9 per 1,000 population. From 1981 to 2005, New Brunswick had an immigration rate of approximately 1 per 1,000 population. From 2005 to 2014, the rate increased to 3 per 1,000, and for the most recent 3 years it has been 4 to 5 per 1,000 population. These numbers indicate that even the low-growth scenario is an optimistic one for New Brunswick.

3.1.4 Constrained forecasting

Constrained forecasting refers to the practice of scaling sub-provincial forecasts to match the independent provincial projections. For each of the seven scenarios, the provincial population is forecast from the base year 2016 up to 2036. The sub-provincial populations are forecast for the same 2016-2036 period. The sub-provincial projections are then scaled so that the sum of the sub-provincial forecasts matches the independent provincial forecast. The constrained forecasting method used here is the same as was used previously by Peters in his report (2017).

3.2 Selected geographies

Peters (2017) developed forecasts for five different small-area geographies in New Brunswick. Our research team developed updated projections for each of the earlier geographies, as well as three additional geographies that were requested by the Government of New Brunswick. Table 2 contains the full list of selected geographies compiled for this report.

It should be noted some geography boundaries can change between census years. In particular, the Census Division and Census Metropolitan Area boundaries were affected by changes from 2006-2011 and 2011-2016. Therefore, the population counts in those two regions vary depending on which boundary definitions are used. Our current projections use the 2016 boundary definitions for both Census Divisions and Census Metropolitan Areas.

Table 2: Selected geographies used for population forecasting (2016)

| Geography | Number of units | Median population | Minimum population | Maximum population | Source |
|--|-----------------|-------------------|--------------------|--------------------|---|
| Counties (Census Divisions) | 15 | 30,955 | 10,472 | 149,623 | Statistics Canada |
| Health Regions | 7 | 76,374 | 25,250 | 209,256 | Health Council |
| Health Council Community Districts | 33 | 15,696 | 5,025 | 81,006 | Health Council |
| Provincial Electoral Districts in 2014 | 49 | 15,081 | 12,208 | 21,822 | Service New Brunswick |
| Regional Service Commission Areas | 12 | 37,332 | 25,812 | 178,781 | Service New Brunswick |
| *Census Metropolitan Areas | 8 | 66,435 | 13,114 | 279,058 | Statistics Canada |
| *Provincial Electoral Districts in 2010 | 55 | 13,037 | 9,364 | 24,322 | Service New Brunswick |
| *PETL Employment Sub-Regions | 39 | 12,703 | 1,582 | 114,088 | Post-Secondary Education, Training and Labour |

*These three geographies were not included in Peters' report.

4 Simplified small-area forecasts

4.1 Population change, by county

Table 3, which is taken directly from Peters (2017), shows the population forecasts for New Brunswick's Counties from 2011-2031. These projections were calculated using the Variable Share of Growth (VSG) method. Table 4, which employs the Linear-Exponential (LIN_EXP) method, uses updated data to project population rates for each County from 2016-2036.

Note that the Northumberland, York, and Gloucester Census Divisions were affected by boundary changes in the periods 2006-2011 and 2011-2016. Northumberland and York changed boundaries in 2006-2011, while Gloucester and Northumberland changed boundaries in 2011-2016. This will affect the comparison between Table 3 and Table 4 since the 2016 Census Division boundaries were used for this report, whereas the previous report used 2011 Census Division boundaries.

Table 3: Forecast population change by growth scenario, by County (2011-2031), VSG method⁵

| County | Population in 2011 | Low | M1 | M2 | M3 | M4 | M5 | High |
|-----------------------|--------------------|---------|--------|--------|--------|---------|--------|--------|
| Saint John | 76,530 | -1,235 | -282 | -145 | -290 | -1,272 | 450 | 877 |
| Charlotte | 26,569 | -2,036 | -1,706 | -1,658 | -1,708 | -2,047 | -1,451 | -1,299 |
| Sunbury | 27,143 | 32 | 612 | 696 | 607 | 9 | 1,058 | 1,319 |
| Queens | 11,086 | -1,352 | -1,067 | -1,026 | -1,070 | -1,361 | -845 | -711 |
| Kings | 69,665 | 1,612 | 3,892 | 4,221 | 3,873 | 1,524 | 5,648 | 6,672 |
| Albert | 28,846 | 1,459 | 2,812 | 3,007 | 2,801 | 1,407 | 3,854 | 4,462 |
| Westmorland | 144,158 | 10,401 | 18,766 | 19,974 | 18,697 | 10,076 | 25,214 | 28,974 |
| Kent | 30,833 | -1,878 | -1,639 | -1,605 | -1,641 | -1,886 | -1,457 | -1,348 |
| Northumberland | 46,204 | -4,855 | -3,915 | -3,779 | -3,923 | -4,885 | -3,187 | -2,750 |
| York | 97,238 | 4,605 | 9,003 | 9,638 | 8,967 | 4,434 | 12,392 | 14,368 |
| Carleton | 27,009 | -1,249 | -1,159 | -1,146 | -1,160 | -1,252 | -1,091 | -1,051 |
| Victoria | 19,931 | -2,269 | -1,804 | -1,737 | -1,808 | -2,284 | -1,442 | -1,224 |
| Madawaska | 33,422 | -3,908 | -3,099 | -2,981 | -3,105 | -3,935 | -2,468 | -2,088 |
| Restigouche | 32,594 | -5,313 | -4,097 | -3,919 | -4,107 | -5,352 | -3,138 | -2,556 |
| Gloucester | 79,943 | -9,144 | -7,246 | -6,970 | -7,261 | -9,205 | -5,766 | -4,876 |
| New Brunswick | 751,171 | -15,130 | 9,070 | 12,570 | 8,870 | -16,030 | 27,770 | 38,770 |

⁵ Peters (2017).

Table 4: Forecast population change by growth scenario, by County (2016-2036), LIN_EXP method

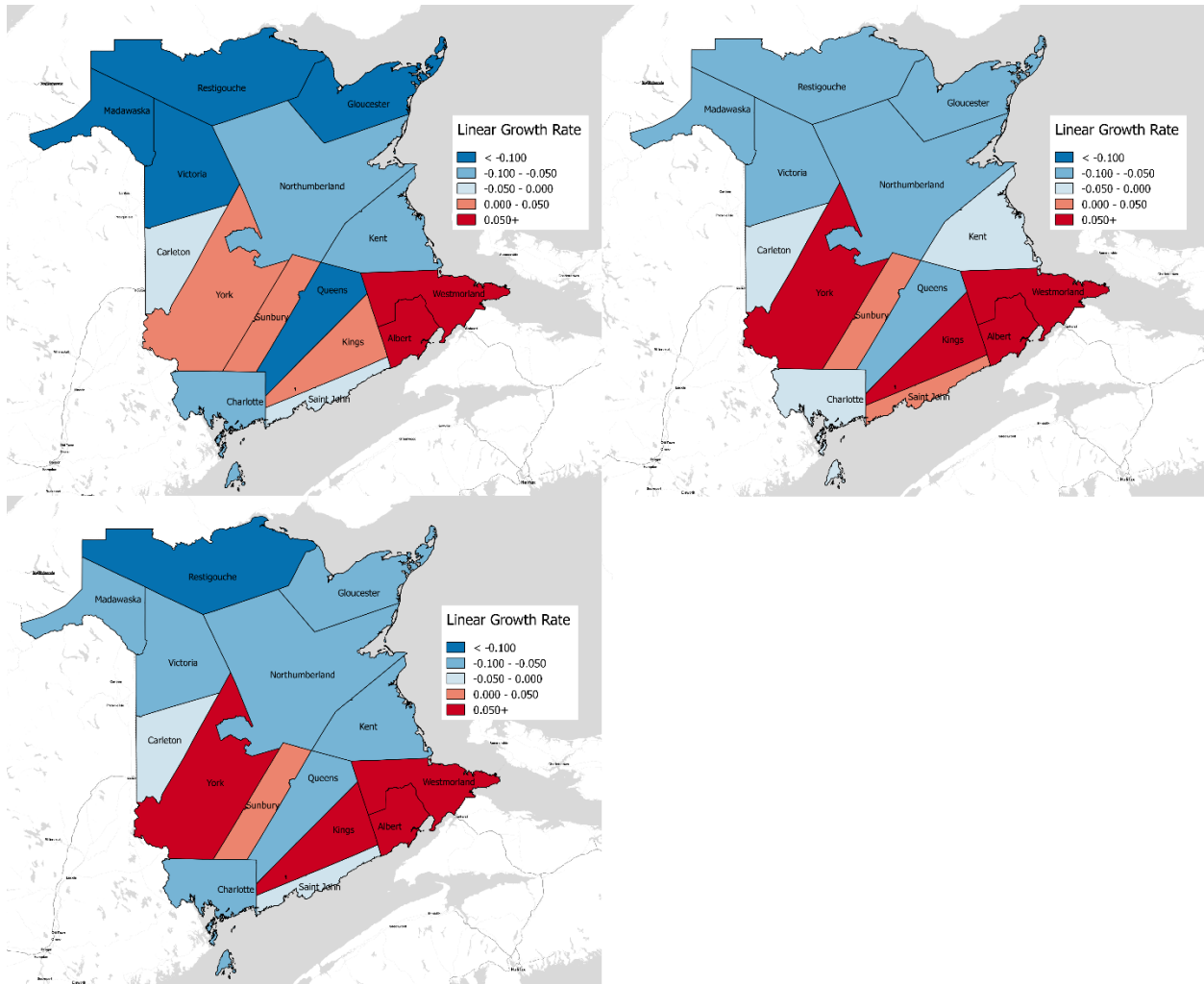
| County | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|-----------------------|--------------------|---------|--------|--------|--------|---------|--------|--------|
| Saint John | 74,020 | -7,761 | -4,685 | -4,266 | -4,685 | -7,733 | -2,454 | -920 |
| Charlotte | 25,428 | -4,831 | -3,873 | -3,743 | -3,873 | -4,822 | -3,179 | -2,701 |
| Sunbury | 27,644 | 1,378 | 2,722 | 2,905 | 2,722 | 1,390 | 3,697 | 4,368 |
| Queens | 10,472 | -2,882 | -2,528 | -2,480 | -2,528 | -2,879 | -2,272 | -2,095 |
| Kings | 68,941 | -488 | 2,686 | 3,118 | 2,686 | -459 | 4,987 | 6,570 |
| Albert | 29,158 | 307 | 1,672 | 1,858 | 1,672 | 319 | 2,663 | 3,343 |
| Westmorland | 149,623 | 17,423 | 25,156 | 26,208 | 25,156 | 17,493 | 30,763 | 34,618 |
| Kent | 30,475 | -4,475 | -3,267 | -3,103 | -3,267 | -4,464 | -2,391 | -1,789 |
| Northumberland | 44,952 | -8,311 | -6,607 | -6,375 | -6,607 | -8,296 | -5,372 | -4,522 |
| York | 99,411 | 8,327 | 13,316 | 13,994 | 13,316 | 8,372 | 16,934 | 19,421 |
| Carleton | 26,220 | -3,109 | -2,035 | -1,889 | -2,035 | -3,099 | -1,257 | -722 |
| Victoria | 18,617 | -4,452 | -3,792 | -3,703 | -3,792 | -4,446 | -3,314 | -2,985 |
| Madawaska | 32,741 | -5,279 | -4,002 | -3,829 | -4,002 | -5,267 | -3,077 | -2,440 |
| Restigouche | 30,955 | -7,460 | -6,366 | -6,217 | -6,366 | -7,450 | -5,573 | -5,027 |
| Gloucester | 78,444 | -11,971 | -8,882 | -8,462 | -8,882 | -11,943 | -6,642 | -5,102 |
| New Brunswick | 747,101 | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Compared to prior projections (Table 3), the updated scenario projections from Table 4 show a significantly greater population decline and smaller growth trends for the province. This is the case in all scenarios except the high-growth scenario, which projects an only slightly larger population increase in Table 4.

The positive population growth forecasts for M2 and M5 are based on interprovincial migration patterns prior to 2001 (M2) and 2010 and 2011 (M5), which are periods of lower loss of population to interprovincial migration. M5 represents a scenario with no loss of population through interprovincial migration. The high-growth scenarios in Tables 3 and 4 similarly project the highest rates of population growth in York County and Westmorland County, with either limited growth or decline in other small areas.

A comparison of M1 to the low-growth scenario shows the impact of permanently increasing immigration to New Brunswick from a rate of 5 per 1,000 population to 7.5 per 1,000 population. Increased immigration alone can nearly stop aggregate population decline in the province, slow the rate of decline in declining regions, and increase the number of Counties experiencing population increase. A comparing of M5 and M2 shows that stopping population loss from interprovincial migration and enabling higher rates of immigration increases the population of the province by nearly 25,000 persons by 2036.

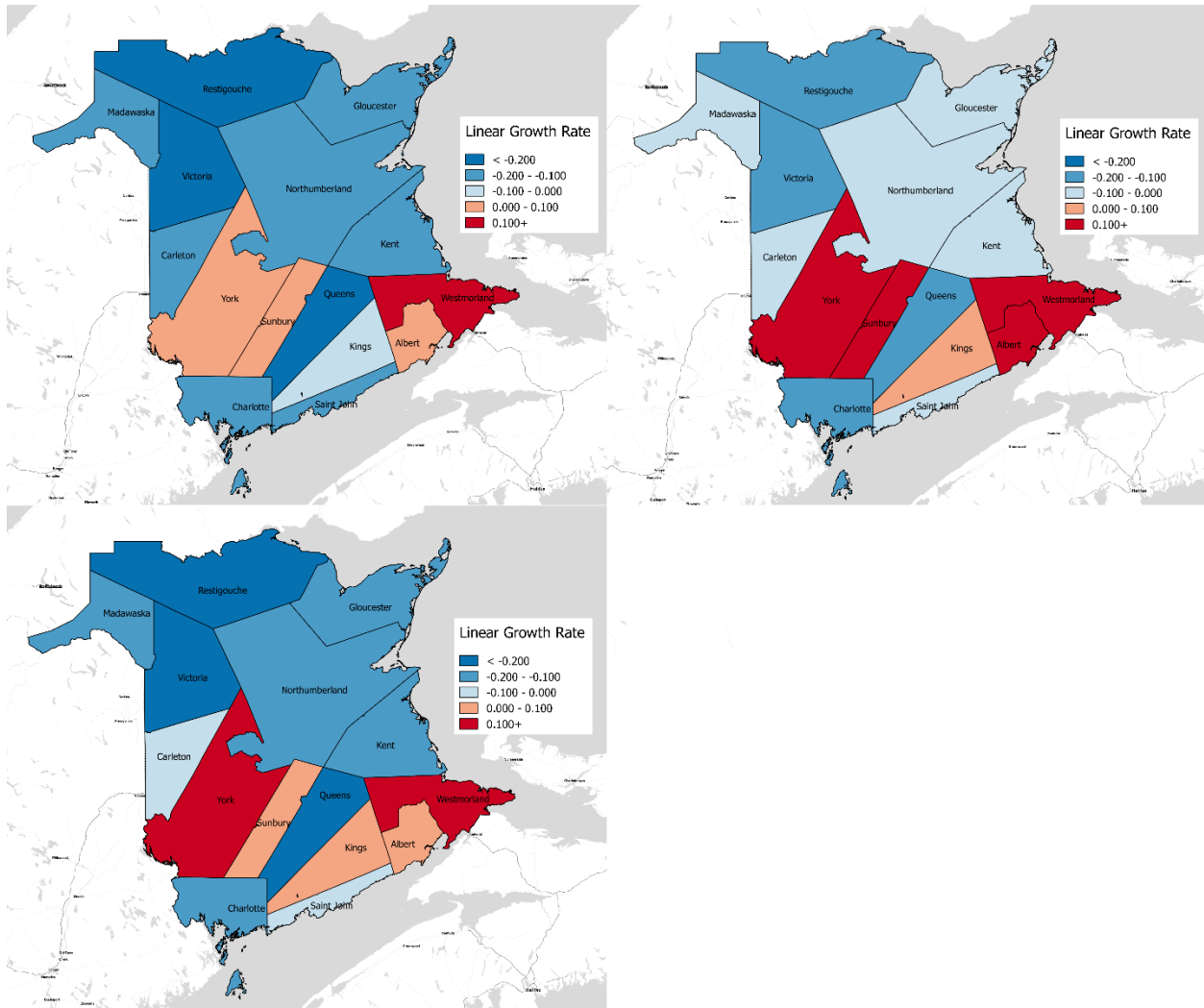
Map 1: Population change by County (2011-2031) with low-growth scenario (top left), high-growth scenario (right), and M1 growth scenario (bottom left); VSG method



Map 1 shows the distribution of high-growth and low-growth projections (2011-2031) across New Brunswick's counties from the first report.⁶ In these scenarios, the only population growth is projected to occur in the south of the province and is concentrated in York, Westmorland, and Albert Counties. Saint John County is predicted to have very low growth, although it is not predicted to decline in the high-growth scenario. Note only the low, high, and M1 growth scenarios are presented in the maps throughout this report. The M1 scenario was selected because unlike the other medium-growth scenarios, it uses migration trends over the entire 1991-2011 period.

⁶ The linear growth rate is the 20-year forecast population difference divided by the base population in the area.

Map 2: Population change by County (2016-2036) with low-growth scenario (top left), high-growth scenario (right), and M1 growth scenario (bottom left); LIN_EXP method



Map 2 shows this report’s high-growth and low-growth projections (2016-2036) for New Brunswick’s Counties. In these scenario, population growth is once again projected to occur at various points throughout the south of the province. However, Saint John County is now forecast to have a decreasing rather than increasing population.

This report employs scenario-based modelling and constrained forecasting; therefore, it forecasts many possible population trends for each County in the province. Figure 1 illustrates the results for three difference scenarios (high-growth, M1-growth, and low-growth) for Saint John County—the County with the most variation from increasing to decreasing population between earlier projections and the updated forecasts of this report. These findings support earlier work: Saint John County is precarious in terms of either population growth or decline, while most growth in the region is concentrated in outlying communities like Quispamsis.

Figure 1: Population forecasts for Saint John County (2011-2031 and 2016-2036)

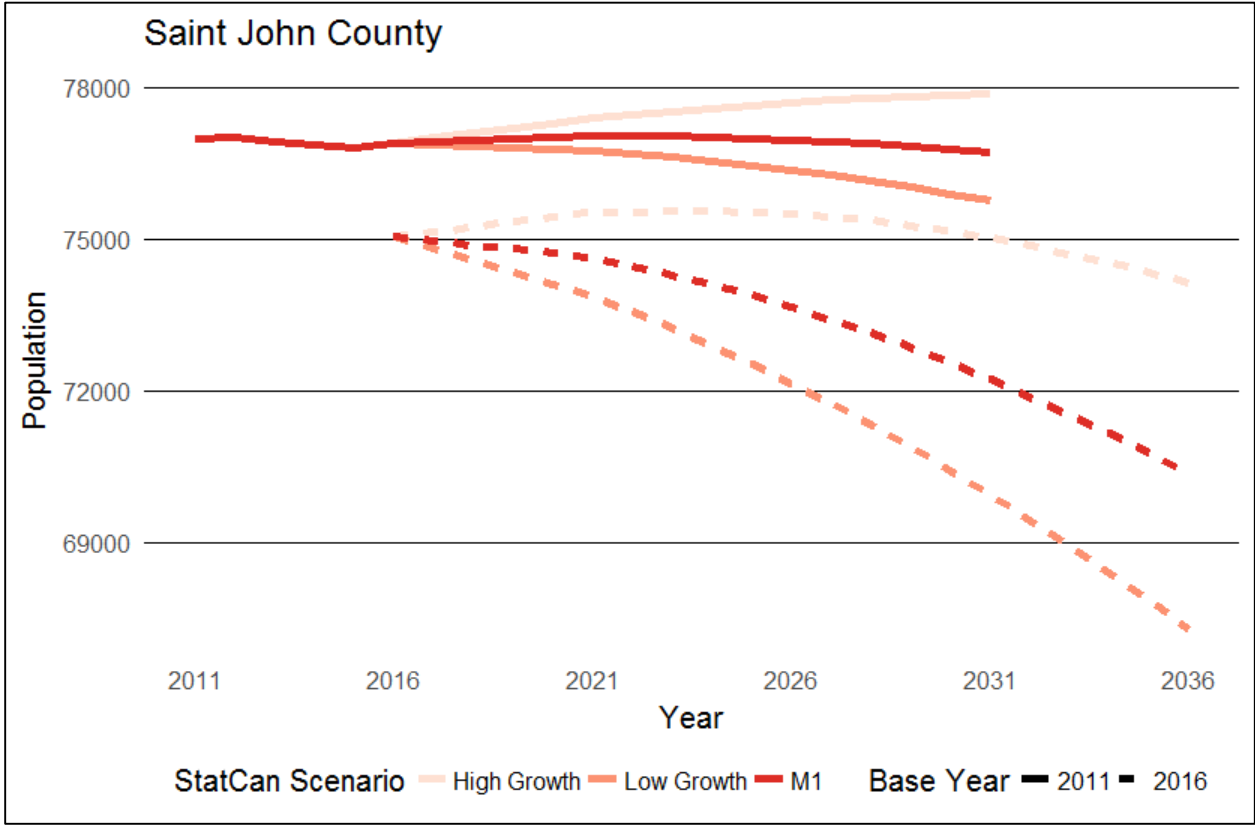


Figure 1 shows that under earlier projections (2011-2031), Saint John County would experience a range of different outcomes based on the growth scenario selected. Only the high-growth scenario shows a significant population increase. However, under our projections (2016-2036), none of the selected growth scenarios show population growth over time.

4.2 Population forecasts for PETL Employment Sub-Regions and alternate geographies

This report produces multiple population forecasts for various small-area geographies—though, some geographies require more forecasts than others. The PETL Employment Sub-Region geography divides New Brunswick into 39 small areas, for example, whereas the County geography only divides the province into 15 (see Table 2). Table 5 lists the names of the PETL Employment Sub-Regions along with labels which will be used for the remaining tables in this report.

Table 5: PETL Employment Sub-Region names with labels

| PETL Employment Sub-Region | Label |
|----------------------------|-------|
| Grand Falls Region | 1a |
| Edmundston Region | 1b |

| PETL Employment Sub-Region | Label |
|---|--------------|
| Haut Madawaska Region | 1c |
| Fredericton | 2a |
| Oromocto/Gagetown | 2b |
| Chipman/Minto | 2c |
| Doaktown area | 2d |
| McAdam/Harvey | 2e |
| Woodstock | 2f |
| Perth-Andover | 2g |
| Restigouche-est | 3a |
| Restigouche-centre | 3b |
| Restigouche-ouest | 3c |
| Allardville | 3d |
| Greater Bathurst | 3e |
| Pte-verte-Petit-Rocher | 3f |
| Beresford-Nigadoo | 3g |
| Saint John | 4a |
| St. Stephen (Islands) | 4b |
| St. Stephen (Main land Charlotte County) | 4c |
| Sussex (including Hampton) | 4d |
| Riverview | 5a |
| Hillsborough, Elgin, Hopewell, Alma and surrounding areas | 5b |
| Bouctouche, Saint Antoine, Cocagne and surrounding areas | 5c |
| Richibucto, Saint-Louis, Acadieville and surrounding areas | 5d |
| Moncton and surrounding areas | 5e |
| Dieppe, Memramcook and surrounding areas | 5f |
| Salisbury, Petitcodiac, and surrounding areas | 5g |
| Dorchester, Port Elgin, Sackville and surrounding areas | 5h |
| Shediac, Beaubassin, Cap-Pelé and surrounding areas | 5i |
| Baie Sainte Anne and surrounding areas | 6a |
| Rogersville and surrounding areas | 6b |
| Blackville and surrounding areas | 6c |
| Sunny Corner and surrounding areas | 6d |
| Neguac and surrounding areas | 6e |
| Miramichi and surrounding areas | 6f |
| Tracadie | 7a |
| Caraquet | 7b |
| Shippagan | 7c |
| New Brunswick | n/a |

The population projections for the PETL Employment Sub-Regions (Table 6) complement the projections for the Counties (Tables 3 and 4), as the larger number of sub-provincial forecasts provides an even more specific account of which small areas will experience positive or negative

population growth. For instance, while the County projections show that York County and Westmorland County will experience a population increase, the PETL Employment Sub-Region projections indicate which specific areas *within* these counties will account for the majority of this population trend.

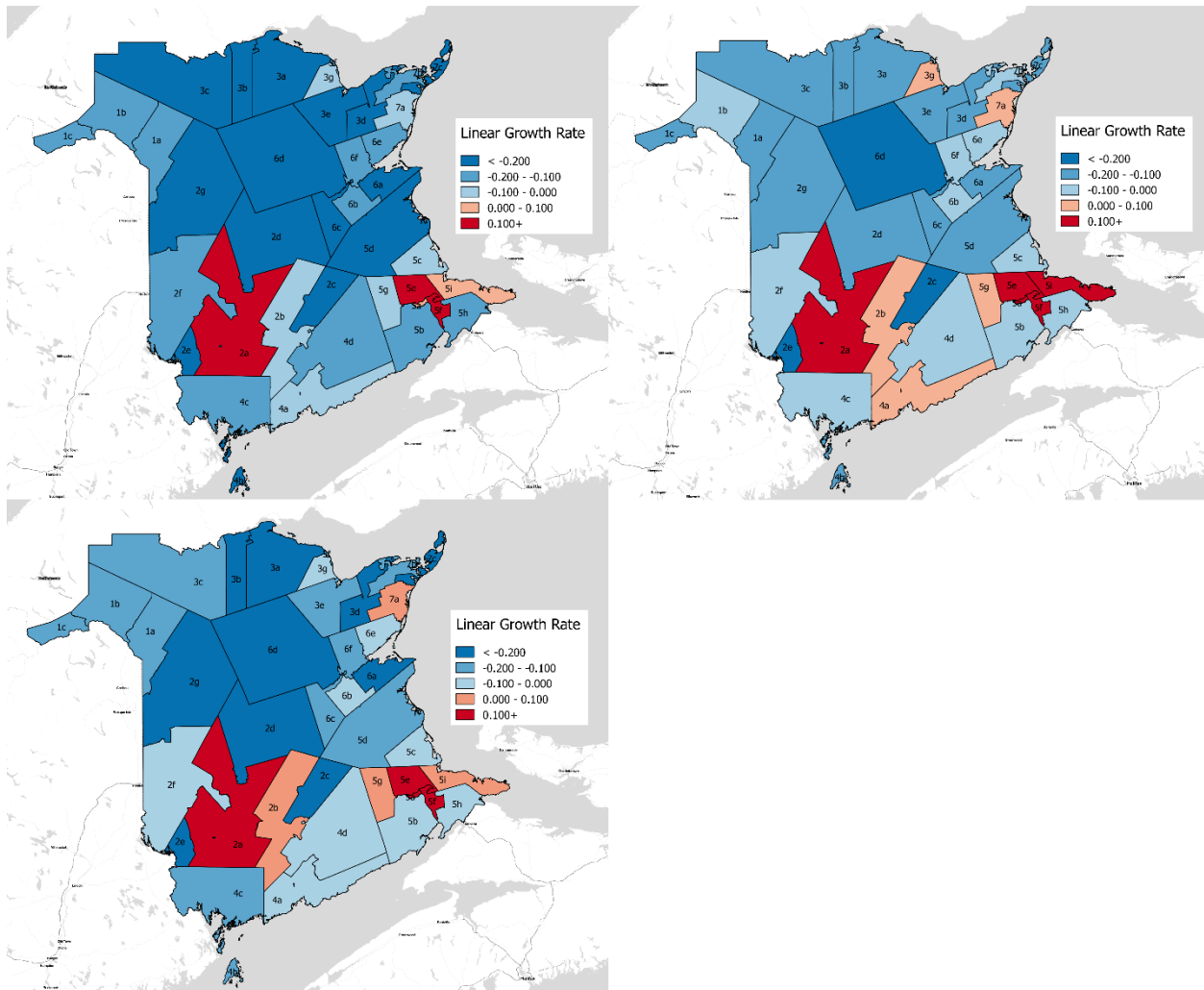
Table 6: Forecast population change by PETL Employment Sub-Region (2016–2036), LIN_EXP method

| PETL Employment Sub-Region | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|----------------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|
| 1a | 13,825 | -2,773 | -2,261 | -2,191 | -2,261 | -2,768 | -1,890 | -1,634 |
| 1b | 24,023 | -3,562 | -2,617 | -2,489 | -2,617 | -3,553 | -1,932 | -1,462 |
| 1c | 4,222 | -842 | -676 | -653 | -676 | -840 | -556 | -473 |
| 2a | 98,903 | 12,051 | 17,196 | 17,896 | 17,196 | 12,098 | 20,927 | 23,492 |
| 2b | 20,111 | -523 | 391 | 515 | 391 | -515 | 1,054 | 1,509 |
| 2c | 6,216 | -1,758 | -1,556 | -1,528 | -1,556 | -1,756 | -1,409 | -1,309 |
| 2d | 4,705 | -1,306 | -1,147 | -1,126 | -1,147 | -1,304 | -1,033 | -954 |
| 2e | 1,582 | -521 | -471 | -464 | -471 | -520 | -435 | -410 |
| 2f | 29,336 | -3,542 | -2,352 | -2,190 | -2,352 | -3,531 | -1,490 | -897 |
| 2g | 13,614 | -3,463 | -2,990 | -2,926 | -2,990 | -3,459 | -2,647 | -2,412 |
| 3a | 12,546 | -3,204 | -2,768 | -2,709 | -2,768 | -3,200 | -2,453 | -2,236 |
| 3b | 12,047 | -2,875 | -2,448 | -2,390 | -2,448 | -2,871 | -2,139 | -1,926 |
| 3c | 6,362 | -1,400 | -1,169 | -1,138 | -1,169 | -1,398 | -1,002 | -887 |
| 3d | 3,229 | -775 | -660 | -644 | -660 | -774 | -577 | -519 |
| 3e | 16,828 | -3,469 | -2,848 | -2,763 | -2,848 | -3,464 | -2,397 | -2,087 |
| 3f | 2,783 | -490 | -383 | -369 | -383 | -489 | -306 | -253 |
| 3g | 11,499 | -1,039 | -554 | -488 | -554 | -1,035 | -202 | 40 |
| 4a | 114,029 | -6,036 | -1,023 | -341 | -1,023 | -5,991 | 2,612 | 5,111 |
| 4b | 4,174 | -963 | -814 | -793 | -814 | -962 | -705 | -631 |
| 4c | 21,254 | -3,882 | -3,074 | -2,964 | -3,074 | -3,874 | -2,488 | -2,085 |
| 4d | 30,961 | -3,196 | -1,910 | -1,735 | -1,910 | -3,185 | -977 | -336 |
| 5a | 19,667 | 1,585 | 2,569 | 2,703 | 2,569 | 1,594 | 3,283 | 3,774 |
| 5b | 9,491 | -1,293 | -912 | -860 | -912 | -1,290 | -636 | -446 |
| 5c | 16,646 | -1,619 | -921 | -826 | -921 | -1,612 | -415 | -67 |
| 5d | 13,829 | -2,810 | -2,297 | -2,228 | -2,297 | -2,805 | -1,926 | -1,670 |
| 5e | 81,638 | 8,734 | 12,921 | 13,491 | 12,921 | 8,772 | 15,957 | 18,044 |
| 5f | 30,224 | 9,925 | 11,777 | 12,029 | 11,777 | 9,942 | 13,120 | 14,044 |
| 5g | 7,055 | -229 | 88 | 131 | 88 | -226 | 318 | 475 |
| 5h | 9,394 | -1,252 | -873 | -822 | -873 | -1,248 | -599 | -410 |
| 5i | 21,312 | 84 | 1,076 | 1,211 | 1,076 | 93 | 1,796 | 2,290 |
| 6a | 3,761 | -945 | -813 | -796 | -813 | -943 | -718 | -653 |
| 6b | 3,133 | -422 | -292 | -274 | -292 | -421 | -197 | -132 |
| 6c | 4,054 | -879 | -736 | -717 | -736 | -878 | -632 | -560 |

| PETL Employment Sub-Region | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|----------------------------|--------------------|---------|--------|--------|--------|---------|--------|--------|
| 6d | 4,304 | -1,284 | -1,143 | -1,124 | -1,143 | -1,283 | -1,041 | -970 |
| 6e | 6,513 | -810 | -545 | -509 | -545 | -807 | -353 | -220 |
| 6f | 19,726 | -2,908 | -2,127 | -2,020 | -2,127 | -2,901 | -1,560 | -1,171 |
| 7a | 18,239 | -795 | 15 | 125 | 15 | -787 | 601 | 1,005 |
| 7b | 13,163 | -1,895 | -1,372 | -1,301 | -1,372 | -1,890 | -993 | -732 |
| 7c | 12,703 | -3,208 | -2,765 | -2,705 | -2,765 | -3,204 | -2,445 | -2,224 |
| New Brunswick | 747,101 | -33,589 | -484 | 4,018 | -484 | -33,285 | 23,515 | 40,018 |

Table 6 shows that the largest rates of population growth (2016-2036) would occur in Fredericton (2a); Moncton and surrounding areas (5e); and Dieppe, Memramcook, and surrounding areas (5f) respectively. Appendix A (page 29) has similar tables for the remaining 6 geographies. The high-growth scenario projections for population change by PETL Employment Sub-Region are illustrated on Map 3.

Map 3: Population change by PETL Employment Sub-Region (2016-2036) with low-growth scenario (top left), high-growth scenario (right), and M1 growth scenario (bottom left); LIN_EXP method



Map 3 serves as a valuable companion to Maps 1 and 2, which project population change by County. Significant population growth in one part of a County can skew the projection results for the County as a whole. However, the layout of even smaller areas in Map 3 allows for more specific population forecasts. For example, Map 2 projects a low rate of population decline for Gloucester County. On the other hand, Map 3 shows that, within Gloucester County, Tracadie (7a) and Beresford-Nigadoo (3g) will experience population increase under the high-growth scenario, whereas the rest of the region will see rates of decline. By breaking the province into smaller components than the County geography does, the PETL Employment Sub-Region geography allows for more accurate projections of growth within the various small areas of New Brunswick. Moreover, the more disaggregated geographies depicted in Map 3 show that population growth is more localized and concentrated around urban centres, rather than throughout Counties as a whole. It should be noted that forecasting for small-areas is more prone to error, and as such the results

should be interpreted with caution and used primarily for guidance as to general trends rather than specific growth values.

4.3 Population forecasts with 5-year base period

Up to this point, this report has used 2006-2016 as a base period for its projections. However, there is also value in considering a study period that reflects the population after the 2008 recession; in this case, the base population would be 2011, rather than 2006. This assumes that return-migration after the recession will have already stabilized to more typical levels. While having a 5-year base period instead of a 10-year base period introduces more volatility into the projections, the 5-year period is still of interest. In addition, historic growth trends (Peters 2017) show that the provincial growth varies considerably within a ten-year period. Therefore, projections have also been done with 2011-2016 as the base period for forecasting and 2006-2011 as the validation period. The 5-year base period results are compared with the 10-year base period results in particular to see which regions show significant change.

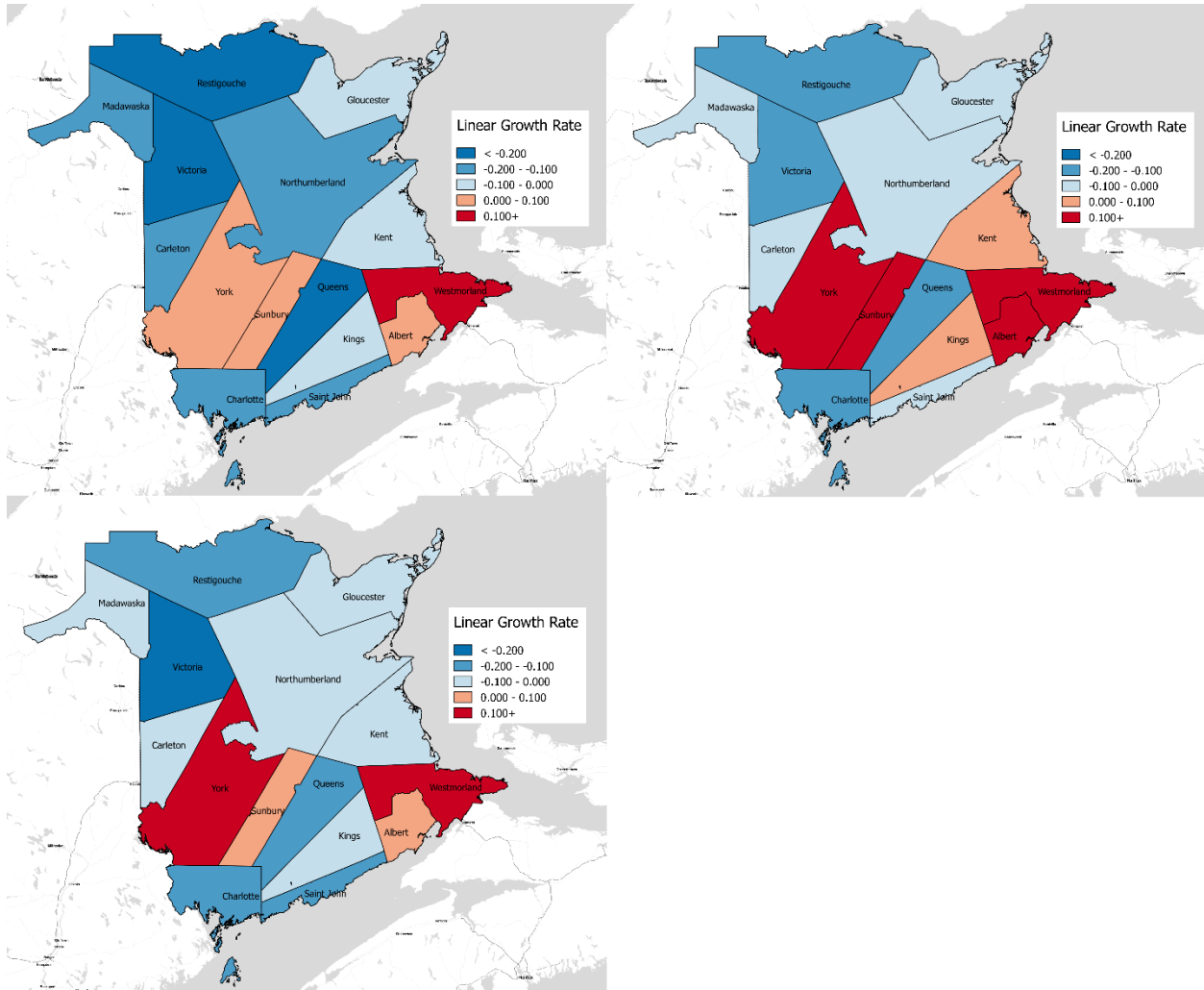
Table 7: Forecast population change from 2016-2036 by County (2011–2016 base period), LIN_EXP method

| County | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|-----------------------|--------------------|---------|--------|--------|--------|---------|--------|--------|
| Saint John | 74,020 | -11,257 | -8,340 | -7,943 | -8,340 | -11,230 | -6,225 | -4,771 |
| Charlotte | 25,428 | -4,772 | -3,811 | -3,681 | -3,811 | -4,763 | -3,115 | -2,636 |
| Sunbury | 27,644 | 1,168 | 2,503 | 2,685 | 2,503 | 1,180 | 3,471 | 4,137 |
| Queens | 10,472 | -2,406 | -2,031 | -1,980 | -2,031 | -2,403 | -1,759 | -1,572 |
| Kings | 68,941 | -4,785 | -1,808 | -1,403 | -1,808 | -4,759 | 351 | 1,835 |
| Albert | 29,158 | 380 | 1,749 | 1,935 | 1,749 | 392 | 2,742 | 3,424 |
| Westmorland | 149,623 | 17,168 | 24,890 | 25,939 | 24,890 | 17,238 | 30,488 | 34,338 |
| Kent | 30,475 | -2,257 | -947 | -769 | -947 | -2,245 | 2 | 655 |
| Northumberland | 44,952 | -5,915 | -4,101 | -3,855 | -4,101 | -5,898 | -2,786 | -1,882 |
| York | 99,411 | 5,664 | 10,532 | 11,194 | 10,532 | 5,708 | 14,061 | 16,488 |
| Carleton | 26,220 | -3,651 | -2,602 | -2,459 | -2,602 | -3,641 | -1,842 | -1,319 |
| Victoria | 18,617 | -4,919 | -4,281 | -4,194 | -4,281 | -4,913 | -3,818 | -3,500 |
| Madawaska | 32,741 | -3,502 | -2,144 | -1,959 | -2,144 | -3,489 | -1,159 | -483 |
| Restigouche | 30,955 | -6,585 | -5,451 | -5,297 | -5,451 | -6,575 | -4,629 | -4,063 |
| Gloucester | 78,444 | -7,916 | -4,642 | -4,196 | -4,642 | -7,887 | -2,267 | -635 |
| New Brunswick | 747,101 | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 7 shows the forecast population change using the 2011-2016 base period. These results are generally similar to the forecast population changes in Table 4, which uses the 2006-2016 base period. However, under the high-growth scenario, the forecast using the 2011-2016 base period now shows 6 Counties with increasing population, whereas the forecast using the 2006-2016 base period only showed 5 Counties with increasing population. Kent County is the additional region with increasing population under scenarios M5 and High. These scenarios show that Kent County

would increase its population if outmigration from the province stopped while increasing immigration levels (M5), or with dramatically higher immigration levels and no change in interprovincial migration (High).

Map 4: Population change by County (2016-2036) with low-growth scenario (top left), high-growth scenario (right), and M1 growth scenario (bottom left); LIN_EXP method using 2011-2016 as the base period



Map 4 shows this report’s low-growth, high-growth, and M1-growth projections (2016-2036) for New Brunswick’s Counties with 2011-2016 as the base period. Similar to Map 2, the population in the Saint John region is shown to be declining. However, the Kent population is now increasing, which was not the case in Map 2.

Figure 2: Population forecasts for Saint John County (2011-2031 and 2016-2036) with 2011-2016 base period

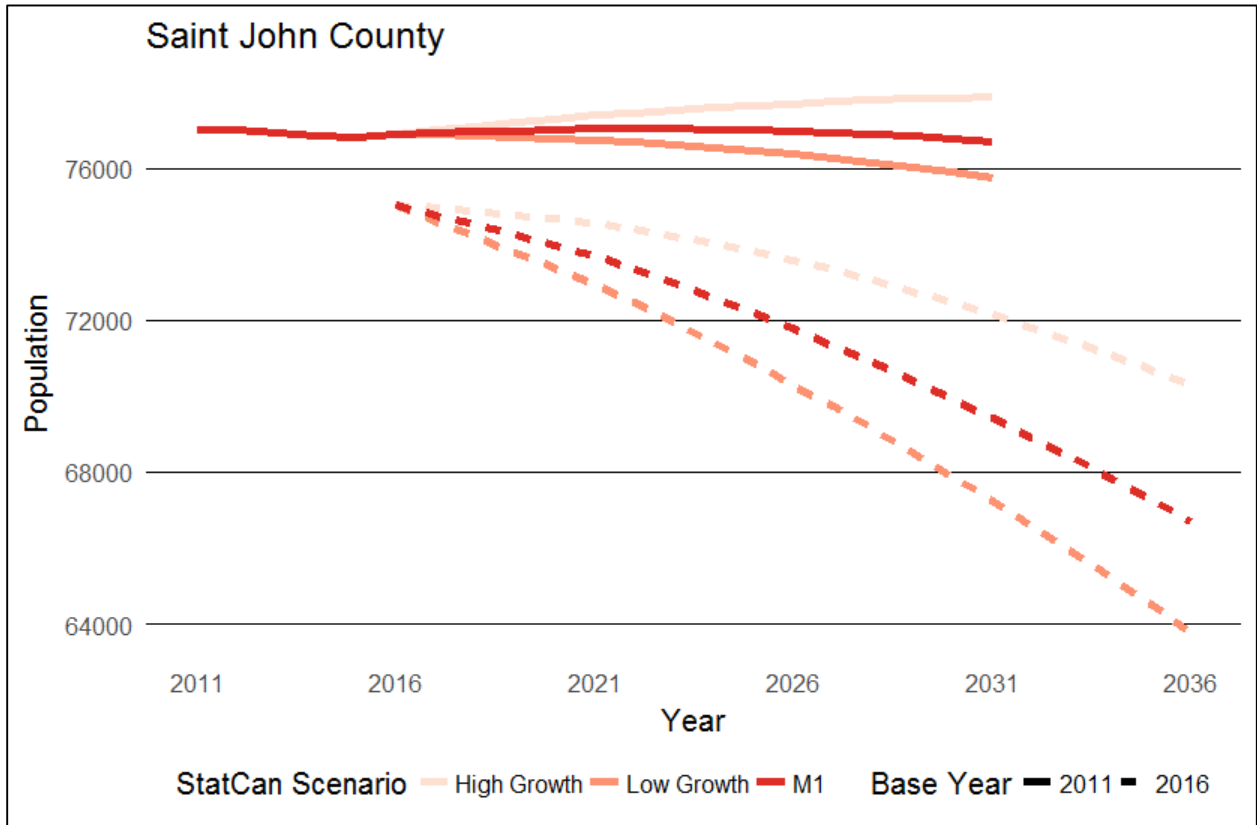


Figure 2 shows the projected population of Saint John County using the 2011 and 2016 base years, similar to Figure 1. Like Figure 1, Figure 2 shows a relatively flat population growth using the 2011 base year and a declining population using the 2016 base year.

Figure 3: Population forecasts for Kent County (2011-2031 and 2016-2036) with 2011-2016 base period

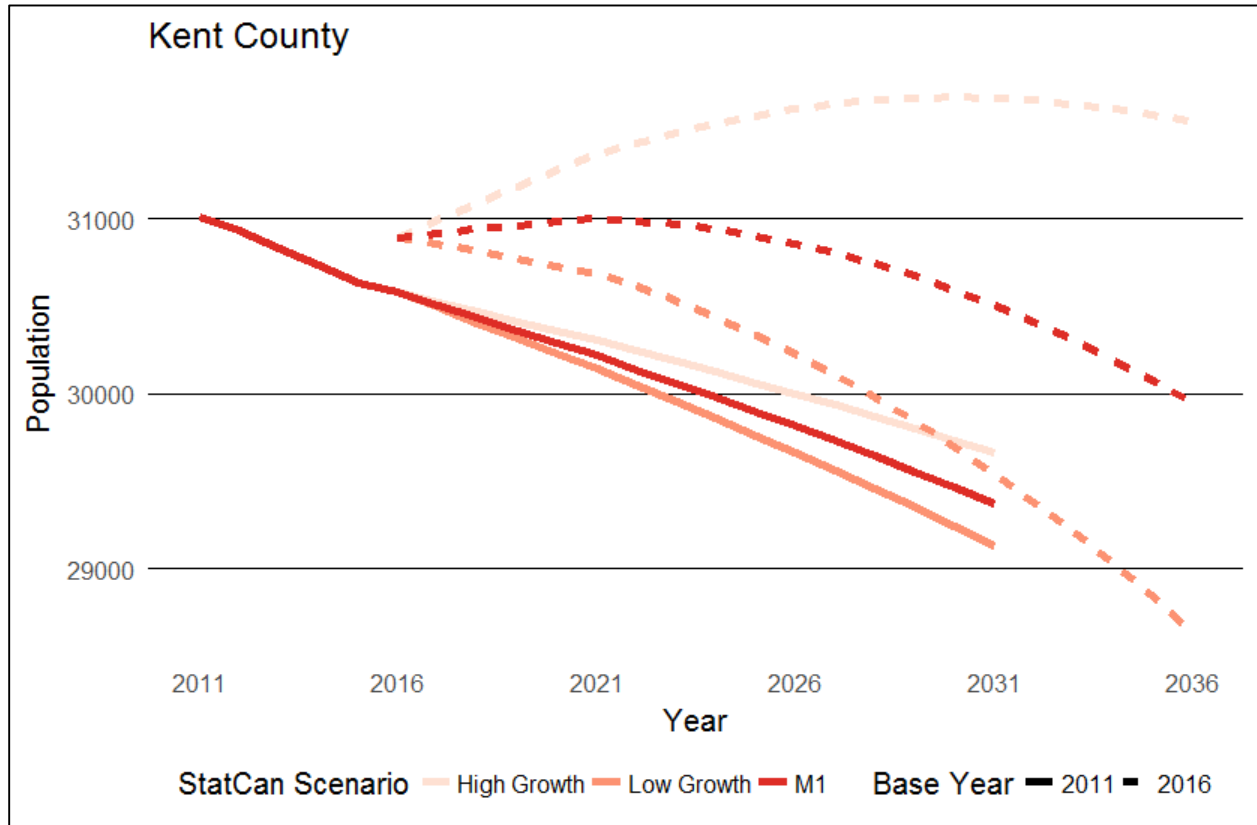


Figure 3 shows the projected population of Kent County using the 2011 and 2016 base years. Kent County would experience a sharp population decline with the 2001-2011 base period irrespective of the growth scenario selected. However, using the 5-year base period (2011-2016), the high-growth scenario projects population growth.

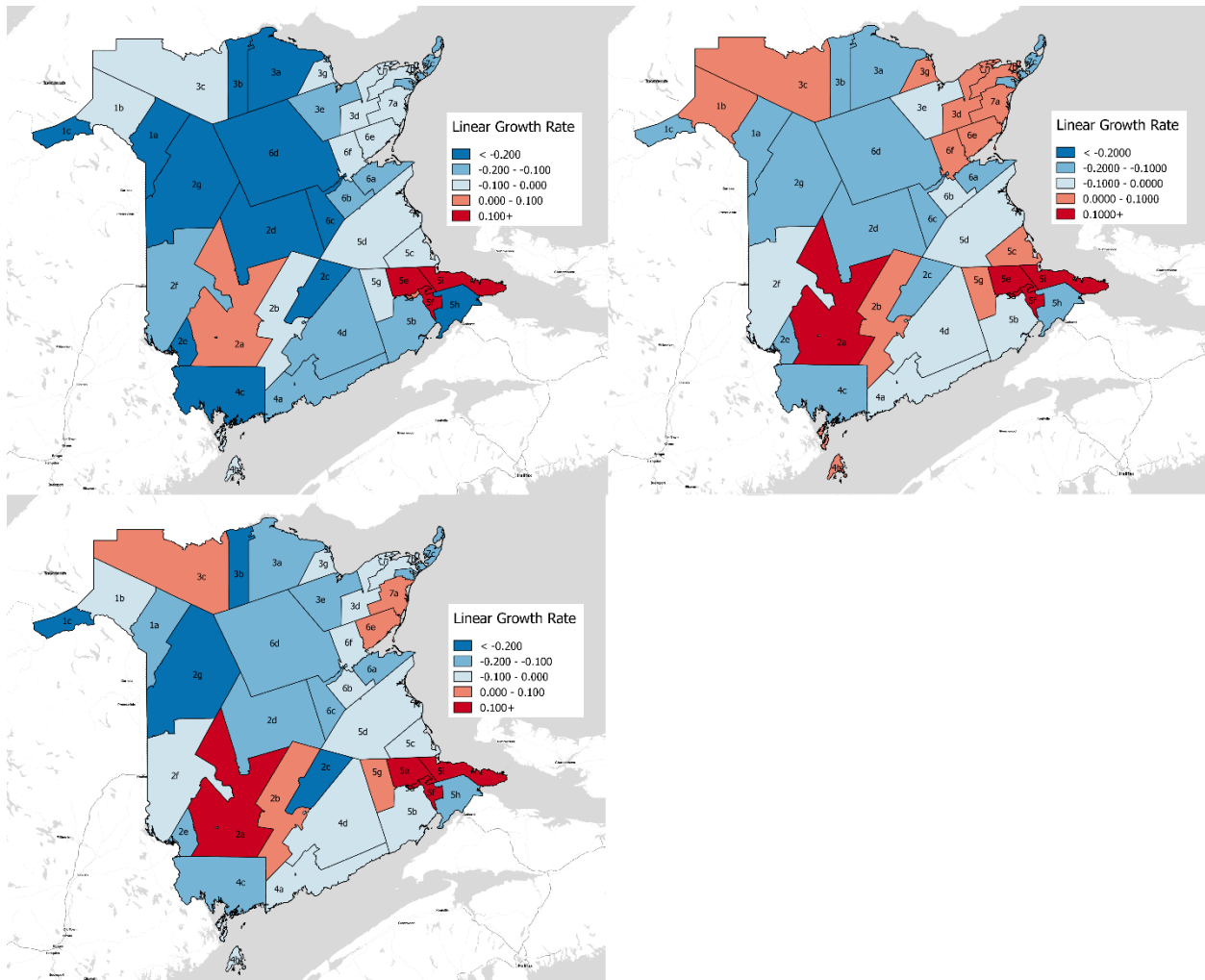
Table 8 and Map 5 show the projected population differences for the PETL Employment Sub-Regions using the 2011-2016 base period. In addition, Appendix B (page 37) shows the Tables of projected population differences for the other 6 geographies using the 2011-2016 base period.

Table 8: Forecast population change by PETL Employment Sub-Region (2011–2016 base period), LIN_EXP method

| PETL Employment Sub-Region | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|----------------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|
| 1a | 13,825 | -2,961 | -2,457 | -2,389 | -2,457 | -2,956 | -2,092 | -1,841 |
| 1b | 24,023 | -1,571 | -536 | -395 | -536 | -1,562 | 215 | 731 |
| 1c | 4,222 | -1,144 | -992 | -971 | -992 | -1,142 | -882 | -806 |
| 2a | 98,903 | 8,899 | 13,900 | 14,579 | 13,900 | 8,944 | 17,526 | 20,018 |
| 2b | 20,111 | -871 | 27 | 149 | 27 | -863 | 678 | 1,126 |

| PETL Employment Sub-Region | Population in 2016 | Low | M1 | M2 | M3 | M4 | M5 | High |
|----------------------------------|-----------------------|----------------|-------------|--------------|-------------|----------------|---------------|---------------|
| 2c | 6,216 | -1,568 | -1,358 | -1,329 | -1,358 | -1,567 | -1,205 | -1,100 |
| 2d | 4,705 | -1,110 | -943 | -920 | -943 | -1,109 | -822 | -738 |
| 2e | 1,582 | -363 | -306 | -299 | -306 | -363 | -265 | -237 |
| 2f | 29,336 | -3,742 | -2,562 | -2,402 | -2,562 | -3,732 | -1,706 | -1,118 |
| 2g | 13,614 | -3,485 | -3,013 | -2,949 | -3,013 | -3,481 | -2,671 | -2,436 |
| 3a | 12,546 | -2,972 | -2,526 | -2,466 | -2,526 | -2,968 | -2,203 | -1,981 |
| 3b | 12,047 | -3,248 | -2,838 | -2,782 | -2,838 | -3,244 | -2,541 | -2,337 |
| 3c | 6,362 | -230 | 55 | 94 | 55 | -227 | 261 | 403 |
| 3d | 3,229 | -196 | -54 | -35 | -54 | -194 | 49 | 119 |
| 3e | 16,828 | -2,568 | -1,905 | -1,815 | -1,905 | -2,562 | -1,425 | -1,094 |
| 3f | 2,783 | -449 | -340 | -325 | -340 | -448 | -261 | -207 |
| 3g | 11,499 | -952 | -462 | -396 | -462 | -947 | -107 | 137 |
| 4a | 114,029 | -13,831 | -9,175 | -8,541 | -9,175 | -13,789 | -5,798 | -3,477 |
| 4b | 4,174 | -209 | -25 | 0 | -25 | -207 | 108 | 200 |
| 4c | 21,254 | -4,545 | -3,767 | -3,662 | -3,767 | -4,538 | -3,203 | -2,816 |
| 4d | 30,961 | -3,186 | -1,899 | -1,724 | -1,899 | -3,174 | -966 | -324 |
| 5a | 19,667 | 1,519 | 2,501 | 2,634 | 2,501 | 1,528 | 3,212 | 3,701 |
| 5b | 9,491 | -1,132 | -743 | -691 | -743 | -1,128 | -462 | -268 |
| 5c | 16,646 | -953 | -225 | -126 | -225 | -946 | 303 | 666 |
| 5d | 13,829 | -1,337 | -757 | -679 | -757 | -1,332 | -337 | -48 |
| 5e | 81,638 | 10,110 | 14,360 | 14,938 | 14,360 | 10,149 | 17,442 | 19,560 |
| 5f | 30,224 | 7,027 | 8,747 | 8,981 | 8,747 | 7,043 | 9,994 | 10,851 |
| 5g | 7,055 | -211 | 106 | 149 | 106 | -209 | 336 | 494 |
| 5h | 9,394 | -2,238 | -1,904 | -1,859 | -1,904 | -2,235 | -1,663 | -1,497 |
| 5i | 21,312 | 2,543 | 3,647 | 3,797 | 3,647 | 2,553 | 4,448 | 4,998 |
| 6a | 3,761 | -739 | -599 | -580 | -599 | -738 | -497 | -427 |
| 6b | 3,133 | -439 | -310 | -292 | -310 | -438 | -216 | -152 |
| 6c | 4,054 | -941 | -800 | -781 | -800 | -939 | -698 | -628 |
| 6d | 4,304 | -1,008 | -854 | -833 | -854 | -1,007 | -743 | -666 |
| 6e | 6,513 | -167 | 127 | 167 | 127 | -165 | 340 | 487 |
| 6f | 19,726 | -1,684 | -847 | -733 | -847 | -1,676 | -240 | 178 |
| 7a | 18,239 | -250 | 584 | 697 | 584 | -243 | 1,189 | 1,605 |
| 7b | 13,163 | -908 | -340 | -263 | -340 | -903 | 72 | 355 |
| 7c | 12,703 | -2,475 | -1,999 | -1,934 | -1,999 | -2,470 | -1,654 | -1,417 |
| New Brunswick | 747,101 | -33,584 | -485 | 4,016 | -485 | -33,283 | 23,517 | 40,017 |

Map 5: Population change by PETL Employment Sub-Regions (2016-2036) with low-growth scenario (top left), high-growth scenario (right), and M1 growth scenario (bottom left); LIN_EXP method using 2011-2016 as the base period.



Changing the base period from 2006-2016 in Map 3 to 2011-2016 in Map 5 has made the differences between the projections in this report and earlier projections (Peters 2017) more notable. In particular, the high-growth scenario shows several increasing populations in the Gloucester region when the base period is changed from 2006-2016 to 2011-2016.

A longer base period generally provides more stable, less volatile results. However, the 2006-2016 period encompasses a mix of years before and after the 2008 recession. If the post-2008 effect is worth focusing on, 2011-2016 period will be more effective as a period than 2006-2016. The question then becomes whether the post-2008 slump is worth focusing on, or if it might be better to have a longer base period. This is related to the question of whether the post-2008 slump reflects a cyclical trend which will reverse itself, or if this is an indication of a long-term trend going forward.

5 Summary

Using the same methods applied in *Small Area Population Forecasts for New Brunswick* (2017), this report updates earlier simplified small-area projections to reflect the most recent census data available. Both reports predict that the largest population increases in New Brunswick will occur in Moncton, Fredericton, and surrounding areas. However, a closer comparison of past predictions (for 2011-2031) and the projections of this report (for 2016-2036) highlights some differences between the two. For example, the two reports' high-growth projections for Saint John County differ significantly from one another, with previous calculations forecasting population increase and our current calculations forecasting decline. The updated population forecasts show greater population decline and smaller growth trends for the province in nearly all scenarios.

Not all forecasts are pessimistic, however. In determining which growth scenario best depicts New Brunswick's current situation and probable future population growth, we highlight assumptions about immigration to New Brunswick (Table 1). Over the past few decades, the rate of immigration to New Brunswick has increased from 1 per 1,000 population (1981-2005) to 3 per 1,000 population (2005-2014) to, most recently, 4-5 per 1,000 population (2014-2016). The current immigration rates are best represented by the low-growth scenario, which assumes the province will attract 5 immigrants per 1,000 population per year until 2036. Even this low-growth scenario is an optimistic one for New Brunswick, as it assumes immigration will increase to and be sustained at approximately 4,500 immigrants per year. However, while this scenario is likely the best representative of the status quo of New Brunswick's current population growth, the medium-growth scenarios (which have an immigration rate of 7.5 per 1,000 population, equaling an additional 5,700 immigrants per year) are likely to better represent the province's population growth if the Atlantic Immigration Pilot and other pro-immigration policies increase the number of annual immigrants to New Brunswick by 40%.

Comparing projections for the 10-year base period with projections for the 5-year base period across all geographies supports the expectation that population growth will center around the CMAs, particularly Moncton and Fredericton. The different geographies indicate regions around the cities which are contributing to population growth. However, the rate of population decline in rural areas differs when using the 10-year, rather than the 5-year, base period. The 10-year base period leads to projections with higher rates of population decline in rural areas, suggesting population redistribution as well as urban population growth. The 5-year base period projections show a slowing rate of population decline in rural areas while cities continue to grow. This indicates a growing urban population and stagnant rural population rather than population redistribution.

While the more pessimistic forecasts are consistent with the sluggish economy following the 2008 recession, the causes behind these differences remain unknown. The different projections resulting from an additional 5 years of population data could reflect a cyclical population downturn—in this case, the situation will eventually reverse itself, and population growth will occur once more. On the other hand, they might indicate a break from previous population trends, in which case earlier forecasts are not as relevant to the province's post-2008 population rates, which will be more difficult to predict.

This report uses simplified small-area regional models to illustrate the shift in population projections that has occurred since the publication of the prior report. A forthcoming report on small-area population forecasts uses cohort-component modelling to determine the causes behind these changes.

6 References

- Peters, Paul A. 2017. *Small Area Population Forecasts for New Brunswick*. Report No. 2017-02. Fredericton, NB: New Brunswick Institute for Research, Data and Training (NB-IRDT). http://www.unb.ca/fredericton/arts/nbirdt/_resources/pdfs/report-small-area-population-forecasts.pdf.
- Statistics Canada. 2010. *Population Projections for Canada, Provinces and Territories: 2009-2036*. Ottawa, ON. <http://www.statcan.gc.ca/pub/91-520-x/91-520-x2010001-eng.htm>.
- Wilson, Tom. 2015. "New Evaluations of Simple Models for Small Area Population Forecasts." *Population, Space and Place* 21:335–53.

Appendix A: Tables for population difference from 2016-2036 in alternate geographies with 2006-2016 base period

Table 9: Forecast population change from 2016-2036 by Health Council Community (2006–2016 base period), LIN_EXP method

| Health Council Community | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|------------------------------|-------------|------------|--------|--------|--------|---------|--------|-------------|
| Kedgwick | 1 | -1,148 | -936 | -907 | -936 | -1,146 | -783 | -677 |
| Campbellton | 2 | -3,004 | -2,580 | -2,523 | -2,580 | -3,000 | -2,273 | -2,062 |
| Dalhousie | 3 | -3,533 | -3,044 | -2,977 | -3,044 | -3,528 | -2,689 | -2,445 |
| Bathurst | 4 | -5,235 | -3,979 | -3,808 | -3,979 | -5,224 | -3,068 | -2,442 |
| Caraquet | 5 | -2,299 | -1,739 | -1,662 | -1,739 | -2,294 | -1,332 | -1,053 |
| Shippagan | 6 | -3,324 | -2,804 | -2,733 | -2,804 | -3,319 | -2,427 | -2,168 |
| Tracadie-Sheila | 7 | -165 | 495 | 584 | 495 | -159 | 973 | 1,301 |
| Néguac | 8 | -1,345 | -1,009 | -963 | -1,009 | -1,342 | -765 | -597 |
| Miramichi | 9 | -6,539 | -5,217 | -5,037 | -5,217 | -6,527 | -4,258 | -3,598 |
| Bouctouche | 10 | -3,490 | -2,759 | -2,660 | -2,759 | -3,483 | -2,229 | -1,865 |
| Salisbury | 11 | -470 | -148 | -104 | -148 | -467 | 86 | 247 |
| Shediac | 12 | -251 | 1,182 | 1,377 | 1,182 | -238 | 2,221 | 2,936 |
| Sackville | 13 | -1,602 | -1,190 | -1,134 | -1,190 | -1,598 | -892 | -687 |
| Riverview | 14.1 | 1,778 | 2,978 | 3,141 | 2,978 | 1,789 | 3,848 | 4,446 |
| Moncton | 14.2 | 8,651 | 12,832 | 13,400 | 12,832 | 8,689 | 15,863 | 17,947 |
| Dieppe | 14.3 | 10,054 | 11,915 | 12,168 | 11,915 | 10,071 | 13,265 | 14,192 |
| Hillsborough | 15 | -1,343 | -1,171 | -1,148 | -1,171 | -1,341 | -1,047 | -961 |
| Sussex | 16 | -2,871 | -1,957 | -1,833 | -1,957 | -2,863 | -1,295 | -840 |
| Minto | 17 | -2,459 | -2,161 | -2,121 | -2,161 | -2,456 | -1,945 | -1,797 |
| Saint John | 18.1 | -7,356 | -4,325 | -3,913 | -4,325 | -7,329 | -2,127 | -616 |
| Grand Bay-Westfield | 18.2 | -1,418 | -1,034 | -982 | -1,034 | -1,415 | -755 | -563 |
| Quispamsis | 18.3 | 2,598 | 4,582 | 4,852 | 4,582 | 2,616 | 6,021 | 7,010 |
| St. George | 19 | -1,759 | -1,330 | -1,271 | -1,330 | -1,755 | -1,018 | -804 |
| St. Stephen | 20 | -3,041 | -2,511 | -2,439 | -2,511 | -3,036 | -2,126 | -1,862 |
| Oromocto | 21 | -389 | 433 | 545 | 433 | -381 | 1,029 | 1,439 |
| Fredericton | 22.1 | 9,049 | 12,142 | 12,563 | 12,142 | 9,077 | 14,386 | 15,928 |
| New Maryland | 22.2 | 2,519 | 3,906 | 4,095 | 3,906 | 2,531 | 4,912 | 5,603 |
| Nackawic | 23 | -1,796 | -1,362 | -1,303 | -1,362 | -1,792 | -1,048 | -832 |
| Douglas | 24 | -563 | 131 | 225 | 131 | -556 | 633 | 979 |
| Florenceville-Bristol | 25 | -3,126 | -2,054 | -1,908 | -2,054 | -3,116 | -1,276 | -741 |
| Perth-Andover | 26 | -2,558 | -2,244 | -2,202 | -2,244 | -2,555 | -2,017 | -1,861 |
| Grand Falls | 27 | -3,318 | -2,742 | -2,664 | -2,742 | -3,313 | -2,324 | -2,037 |
| Edmundston | 28 | -3,833 | -2,785 | -2,643 | -2,785 | -3,823 | -2,026 | -1,504 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 10: Forecast population change by Census Metropolitan Area (2006–2016 base period), LIN_EXP method

| Census Metropolitan Area | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|------------|------------|---------|---------|---------|---------|---------|-------------|
| Moncton | 305 | 19,592 | 27,202 | 28,237 | 27,202 | 19,661 | 32,720 | 36,514 |
| Saint John | 310 | -6,369 | -814 | -59 | -814 | -6,319 | 3,213 | 5,982 |
| Fredericton | 320 | 12,322 | 17,609 | 18,328 | 17,609 | 12,370 | 21,443 | 24,078 |
| Bathurst | 328 | -3,911 | -2,664 | -2,494 | -2,664 | -3,900 | -1,759 | -1,137 |
| Miramichi | 329 | -4,641 | -3,576 | -3,431 | -3,576 | -4,632 | -2,804 | -2,273 |
| Campbellton (New Brunswick part) | 330 | -3,166 | -2,699 | -2,635 | -2,699 | -3,162 | -2,360 | -2,127 |
| Edmundston | 335 | -2,908 | -1,976 | -1,849 | -1,976 | -2,899 | -1,300 | -835 |
| Non-CMA | 999 | -44,502 | -33,566 | -32,080 | -33,566 | -44,403 | -25,637 | -20,186 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 11: Forecast population change by Health Region (2006–2016 base period), LIN_EXP method

| Health Region | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-------------|------------|--------|--------|--------|---------|--------|-------------|
| Zone 1 - Moncton / South-East Area | 1301 | 13,498 | 23,816 | 25,219 | 23,816 | 13,591 | 31,298 | 36,441 |
| Zone 2 - Fundy Shore / Saint John Area | 1302 | -13,787 | -6,512 | -5,523 | -6,512 | -13,721 | -1,236 | 2,391 |
| Zone 3 - Fredericton / River Valley Area | 1303 | 390 | 8,491 | 9,592 | 8,491 | 463 | 14,364 | 18,402 |
| Zone 4 - Madawaska / North West Area | 1304 | -8,254 | -6,417 | -6,167 | -6,417 | -8,237 | -5,084 | -4,168 |
| Zone 5 - Restigouche Area | 1305 | -6,276 | -5,393 | -5,273 | -5,393 | -6,268 | -4,752 | -4,312 |
| Zone 6 - Bathurst / Acadian Peninsula Area | 1306 | -11,343 | -8,321 | -7,910 | -8,321 | -11,316 | -6,130 | -4,624 |
| Zone 7 - Miramichi Area | 1307 | -7,810 | -6,148 | -5,922 | -6,148 | -7,795 | -4,943 | -4,114 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 12: Forecast population change by Provincial Electoral District in 2010 (2006–2016 base period), LIN_EXP method

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-----------|------------|--------|--------|--------|--------|--------|-------------|
| Campbellton-Restigouche Centre | 1 | -2,799 | -2,384 | -2,328 | -2,384 | -2,795 | -2,084 | -1,877 |
| Dalhousie-Restigouche East | 2 | -2,824 | -2,406 | -2,349 | -2,406 | -2,821 | -2,102 | -1,893 |
| Nigadoo-Chaleur | 3 | -1,827 | -1,338 | -1,271 | -1,338 | -1,822 | -983 | -739 |
| Bathurst | 4 | -2,364 | -1,935 | -1,877 | -1,935 | -2,360 | -1,625 | -1,411 |
| Nepisiguit | 5 | -1,984 | -1,581 | -1,527 | -1,581 | -1,980 | -1,290 | -1,089 |
| Caraquet | 6 | -1,678 | -1,260 | -1,203 | -1,260 | -1,674 | -957 | -749 |
| Lamèque-Shippagan-Miscou | 7 | -2,646 | -2,295 | -2,248 | -2,295 | -2,643 | -2,041 | -1,866 |
| Centre-Péninsule-Saint-Sauveur | 8 | -1,459 | -1,013 | -952 | -1,013 | -1,455 | -689 | -467 |
| Tracadie-Sheila | 9 | -56 | 500 | 575 | 500 | -51 | 903 | 1,180 |
| Miramichi-Bay-Neguac | 10 | -1,274 | -795 | -730 | -795 | -1,270 | -447 | -209 |
| Miramichi-Bay du Vin | 11 | -2,786 | -2,413 | -2,362 | -2,413 | -2,783 | -2,142 | -1,956 |
| Miramichi Centre | 12 | -1,017 | -540 | -475 | -540 | -1,013 | -194 | 43 |
| Southwest Miramichi | 13 | -2,931 | -2,586 | -2,539 | -2,586 | -2,928 | -2,335 | -2,163 |
| Rogersville-Kouchibouguac | 14 | -2,413 | -2,017 | -1,963 | -2,017 | -2,410 | -1,729 | -1,532 |
| Kent | 15 | -1,424 | -932 | -865 | -932 | -1,420 | -575 | -329 |
| Kent SouthKent-Sud | 16 | -604 | 42 | 130 | 42 | -598 | 511 | 833 |
| Shediac-Cap-Pelé | 17 | 565 | 1,342 | 1,448 | 1,342 | 572 | 1,906 | 2,294 |
| Tantramar | 18 | -1,601 | -1,198 | -1,143 | -1,198 | -1,597 | -905 | -705 |
| Memramcook-Lakeville-Dieppe | 19 | 3,030 | 3,875 | 3,989 | 3,875 | 3,038 | 4,487 | 4,908 |
| Dieppe Centre-Lewisville | 20 | 7,514 | 8,883 | 9,070 | 8,883 | 7,526 | 9,877 | 10,559 |
| Moncton East | 21 | 807 | 1,583 | 1,689 | 1,583 | 814 | 2,146 | 2,533 |
| Moncton West | 22 | -2,165 | -1,611 | -1,536 | -1,611 | -2,160 | -1,209 | -933 |
| Moncton North | 23 | -2,047 | -1,502 | -1,428 | -1,502 | -2,042 | -1,107 | -835 |
| Moncton Crescent | 24 | 10,711 | 12,281 | 12,495 | 12,281 | 10,725 | 13,420 | 14,203 |
| Petitcodiac | 25 | -493 | 236 | 335 | 236 | -487 | 765 | 1,128 |
| Riverview | 26 | -301 | 374 | 466 | 374 | -295 | 864 | 1,201 |

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-----------|------------|--------|--------|--------|--------|--------|-------------|
| Albert | 27 | 618 | 1,294 | 1,386 | 1,294 | 624 | 1,784 | 2,121 |
| Kings-East | 28 | -1,495 | -900 | -819 | -900 | -1,490 | -468 | -171 |
| Hampton-Kings | 29 | -744 | -84 | 6 | -84 | -738 | 395 | 724 |
| Quispamsis | 30 | 3,833 | 4,853 | 4,992 | 4,853 | 3,842 | 5,593 | 6,101 |
| Saint John-Fundy | 31 | -1,213 | -602 | -519 | -602 | -1,207 | -159 | 146 |
| Rothesay | 32 | -1,202 | -642 | -566 | -642 | -1,197 | -236 | 43 |
| Saint John East | 33 | -651 | -48 | 34 | -48 | -646 | 389 | 689 |
| Saint John Harbour | 34 | -1,418 | -892 | -820 | -892 | -1,413 | -511 | -248 |
| Saint John Portland | 35 | -2,198 | -1,614 | -1,534 | -1,614 | -2,193 | -1,190 | -899 |
| Saint John Lancaster | 36 | -1,409 | -864 | -790 | -864 | -1,404 | -468 | -196 |
| Fundy-River Valley | 37 | -1,687 | -1,195 | -1,128 | -1,195 | -1,682 | -838 | -593 |
| Charlotte-The Isles | 38 | -2,134 | -1,672 | -1,610 | -1,672 | -2,130 | -1,338 | -1,108 |
| Charlotte-Campobello | 39 | -2,640 | -2,161 | -2,096 | -2,161 | -2,636 | -1,814 | -1,575 |
| Oromocto | 40 | 520 | 1,239 | 1,337 | 1,239 | 527 | 1,761 | 2,119 |
| Grand Lake-Gagetown | 41 | -3,195 | -2,848 | -2,800 | -2,848 | -3,192 | -2,596 | -2,423 |
| Fredericton-Nashwaaksis | 42 | -1,151 | -524 | -439 | -524 | -1,145 | -70 | 242 |
| Fredericton-Fort Nashwaak | 43 | 5,431 | 6,579 | 6,735 | 6,579 | 5,442 | 7,411 | 7,984 |
| Fredericton-Lincoln | 44 | 909 | 1,709 | 1,818 | 1,709 | 916 | 2,289 | 2,688 |
| Fredericton-Silverwood | 45 | 3,755 | 4,762 | 4,899 | 4,762 | 3,764 | 5,493 | 5,995 |
| New Maryland-Sunbury West | 46 | 1,352 | 2,054 | 2,149 | 2,054 | 1,358 | 2,563 | 2,913 |
| York | 47 | 26 | 632 | 714 | 632 | 31 | 1,071 | 1,373 |
| York NorthYork-Nord | 48 | -510 | 164 | 255 | 164 | -504 | 652 | 988 |
| Woodstock | 49 | -1,051 | -407 | -320 | -407 | -1,046 | 60 | 381 |
| Carleton | 50 | -2,309 | -1,855 | -1,794 | -1,855 | -2,305 | -1,526 | -1,300 |
| Victoria-Tobique | 51 | -2,699 | -2,343 | -2,295 | -2,343 | -2,696 | -2,085 | -1,908 |
| Grand Falls-Drummond-Saint-André | 52 | -2,032 | -1,625 | -1,569 | -1,625 | -2,028 | -1,329 | -1,126 |
| Restigouche-la-Vallée | 53 | -2,865 | -2,451 | -2,394 | -2,451 | -2,861 | -2,150 | -1,944 |

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-------|------------|--------|--------|--------|---------|--------|-------------|
| Edmundston-Saint-Basile | 54 | -931 | -356 | -278 | -356 | -926 | 61 | 347 |
| Madawaska-les-Lacs | 55 | -2,427 | -1,999 | -1,941 | -1,999 | -2,423 | -1,689 | -1,476 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 13: Forecast population change by Provincial Electoral District in 2014 (2006–2016 base period), LIN_EXP method

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-------|------------|--------|--------|--------|--------|--------|-------------|
| Restigouche West | 1 | -3,239 | -2,725 | -2,655 | -2,725 | -3,234 | -2,352 | -2,096 |
| Campbellton-Dalhousie | 2 | -3,173 | -2,670 | -2,602 | -2,670 | -3,169 | -2,306 | -2,055 |
| Restigouche-Chaleur | 3 | -2,459 | -1,939 | -1,868 | -1,939 | -2,454 | -1,562 | -1,303 |
| Bathurst West-Beresford | 4 | -1,316 | -733 | -654 | -733 | -1,310 | -311 | -21 |
| Bathurst East-Nepisiguit-Saint-Isidore | 5 | -3,803 | -3,352 | -3,291 | -3,352 | -3,799 | -3,026 | -2,801 |
| Caraquet | 6 | -1,784 | -1,265 | -1,194 | -1,265 | -1,780 | -888 | -629 |
| Shippagan-Lamèque-Miscou | 7 | -3,128 | -2,672 | -2,610 | -2,672 | -3,124 | -2,342 | -2,115 |
| Tracadie-Sheila | 8 | -149 | 507 | 597 | 507 | -143 | 983 | 1,311 |
| Miramichi Bay-Neguac | 9 | -1,363 | -733 | -647 | -733 | -1,357 | -276 | 38 |
| Miramichi | 10 | -2,635 | -2,103 | -2,031 | -2,103 | -2,630 | -1,718 | -1,453 |
| Southwest Miramichi-Bay du Vin | 11 | -3,546 | -3,069 | -3,004 | -3,069 | -3,542 | -2,722 | -2,484 |
| Kent North | 12 | -2,892 | -2,315 | -2,236 | -2,315 | -2,886 | -1,896 | -1,608 |
| Kent South | 13 | -2,016 | -1,402 | -1,319 | -1,402 | -2,011 | -957 | -651 |
| Shediac Bay-Dieppe | 14 | 6,500 | 7,606 | 7,756 | 7,606 | 6,510 | 8,407 | 8,959 |
| Shediac-Beaubassin-Cap-Pelé | 15 | 653 | 1,431 | 1,537 | 1,431 | 660 | 1,996 | 2,384 |
| Memramcook-Tantramar | 16 | -1,808 | -1,185 | -1,100 | -1,185 | -1,803 | -733 | -422 |
| Dieppe | 17 | 3,476 | 4,331 | 4,447 | 4,331 | 3,484 | 4,951 | 5,377 |
| Moncton East | 18 | 2,069 | 2,923 | 3,039 | 2,923 | 2,077 | 3,542 | 3,967 |

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Moncton Centre | 19 | -682 | 5 | 99 | 5 | -676 | 504 | 846 |
| Moncton South | 20 | -2,622 | -2,045 | -1,966 | -2,045 | -2,617 | -1,627 | -1,339 |
| Moncton Northwest | 21 | 8,184 | 9,375 | 9,537 | 9,375 | 8,195 | 10,239 | 10,833 |
| Moncton Southwest | 22 | 1,705 | 2,523 | 2,634 | 2,523 | 1,713 | 3,116 | 3,523 |
| Riverview | 23 | -296 | 379 | 471 | 379 | -290 | 868 | 1,204 |
| Albert | 24 | 1,137 | 1,945 | 2,054 | 1,945 | 1,144 | 2,530 | 2,933 |
| Gagetown-Petitcodiac | 25 | -2,274 | -1,650 | -1,565 | -1,650 | -2,268 | -1,197 | -886 |
| Sussex-Fundy-St. Martins | 26 | -1,975 | -1,347 | -1,262 | -1,347 | -1,970 | -891 | -578 |
| Hampton | 27 | -519 | 204 | 302 | 204 | -512 | 727 | 1,087 |
| Quispamsis | 28 | 3,791 | 4,712 | 4,837 | 4,712 | 3,800 | 5,379 | 5,838 |
| Rothesay | 29 | -1,648 | -1,060 | -980 | -1,060 | -1,643 | -633 | -340 |
| Saint John East | 30 | 811 | 1,554 | 1,655 | 1,554 | 818 | 2,093 | 2,463 |
| Portland-Simonds | 31 | -1,785 | -1,125 | -1,035 | -1,125 | -1,779 | -646 | -317 |
| Saint John Harbour | 32 | -2,854 | -2,286 | -2,208 | -2,286 | -2,849 | -1,873 | -1,590 |
| Saint John Lancaster | 33 | -1,500 | -938 | -861 | -938 | -1,495 | -530 | -249 |
| Kings Centre | 34 | -1,392 | -805 | -725 | -805 | -1,386 | -380 | -87 |
| Fundy-The Isles-Saint John West | 35 | -2,429 | -1,855 | -1,777 | -1,855 | -2,424 | -1,439 | -1,153 |
| Charlotte-Campobello | 36 | -3,602 | -3,036 | -2,959 | -3,036 | -3,597 | -2,626 | -2,343 |
| Oromocto-Lincoln | 37 | 1,442 | 2,429 | 2,563 | 2,429 | 1,451 | 3,144 | 3,636 |
| Fredericton-Grand Lake | 38 | -1,185 | -551 | -465 | -551 | -1,180 | -91 | 225 |
| New Maryland-Sunbury | 39 | 2,796 | 3,758 | 3,889 | 3,758 | 2,805 | 4,456 | 4,936 |
| Fredericton South | 40 | 905 | 1,648 | 1,749 | 1,648 | 911 | 2,188 | 2,558 |
| Fredericton North | 41 | 277 | 998 | 1,096 | 998 | 284 | 1,521 | 1,880 |
| Fredericton-York | 42 | 2,903 | 3,809 | 3,933 | 3,809 | 2,911 | 4,467 | 4,919 |
| Fredericton West-Hanwell | 43 | 2,475 | 3,373 | 3,495 | 3,373 | 2,483 | 4,023 | 4,471 |
| Carleton-York | 44 | -2,106 | -1,443 | -1,353 | -1,443 | -2,100 | -963 | -633 |
| Carleton | 45 | -1,765 | -1,141 | -1,056 | -1,141 | -1,760 | -689 | -378 |

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-------|------------|--------|--------|--------|---------|--------|-------------|
| Carleton-Victoria | 46 | -3,326 | -2,784 | -2,710 | -2,784 | -3,321 | -2,391 | -2,120 |
| Victoria-La Vallée | 47 | -3,024 | -2,477 | -2,403 | -2,477 | -3,019 | -2,080 | -1,808 |
| Edmundston-Madawaska Centre | 48 | -1,511 | -913 | -832 | -913 | -1,505 | -480 | -182 |
| Madawaska Les Lacs-Edmundston | 49 | -2,900 | -2,374 | -2,302 | -2,374 | -2,895 | -1,993 | -1,730 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 14: Forecast population change by Regional Service Commission (2006–2016 base period), LIN_EXP method

| Regional Service Commission | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-------|------------|--------|--------|--------|--------|--------|-------------|
| Northwest Regional Service Commission | 1 | -8,152 | -6,334 | -6,087 | -6,334 | -8,136 | -5,015 | -4,109 |
| Restigouche Regional Service Commission | 2 | -6,325 | -5,417 | -5,294 | -5,417 | -6,317 | -4,760 | -4,307 |
| Chaleur Regional Service Commission | 3 | -6,284 | -4,937 | -4,754 | -4,937 | -6,272 | -3,961 | -3,290 |
| Acadian Peninsula Regional Service Commission | 4 | -6,834 | -4,916 | -4,656 | -4,916 | -6,817 | -3,526 | -2,570 |
| Greater Miramichi Regional Service Commission | 5 | -7,185 | -5,697 | -5,494 | -5,697 | -7,171 | -4,617 | -3,875 |
| Kent Regional Service Commission | 6 | -4,912 | -3,619 | -3,443 | -3,619 | -4,900 | -2,681 | -2,036 |
| Southeast Regional Service Commission | 7 | 17,843 | 26,947 | 28,185 | 26,947 | 17,926 | 33,549 | 38,087 |
| Regional Service Commission 8 | 8 | -2,629 | -1,402 | -1,235 | -1,402 | -2,618 | -512 | 99 |
| Fundy Regional Service Commission | 9 | -6,060 | -980 | -289 | -980 | -6,014 | 2,704 | 5,236 |
| Southwest New Brunswick | 10 | -5,703 | -4,632 | -4,486 | -4,632 | -5,693 | -3,856 | -3,322 |

| Regional Service Commission | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---------------------------------------|-----------|------------|--------|--------|--------|---------|--------|-------------|
| Service Commission | | | | | | | | |
| Regional Service Commission 11 | 11 | 8,267 | 14,734 | 15,613 | 14,734 | 8,326 | 19,423 | 22,647 |
| Regional Service Commission 12 | 12 | -5,610 | -4,232 | -4,044 | -4,232 | -5,597 | -3,232 | -2,545 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Appendix B: Tables for population difference from 2016-2036 in alternate geographies with 2011-2016 base period

Table 15: Forecast population change from 2016-2036 by Health Council Community (2011–2016 base period), LIN_EXP method

| Health Council Community | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|------------------------------|-------------|------------|--------|--------|--------|---------|--------|-------------|
| Kedgwick | 1 | -48 | 214 | 249 | 214 | -46 | 404 | 535 |
| Campbellton | 2 | -3,260 | -2,848 | -2,792 | -2,848 | -3,256 | -2,550 | -2,345 |
| Dalhousie | 3 | -3,435 | -2,941 | -2,874 | -2,941 | -3,430 | -2,583 | -2,337 |
| Bathurst | 4 | -3,894 | -2,576 | -2,397 | -2,576 | -3,882 | -1,621 | -965 |
| Caraquet | 5 | -856 | -229 | -144 | -229 | -850 | 225 | 538 |
| Shippagan | 6 | -2,561 | -2,006 | -1,931 | -2,006 | -2,556 | -1,604 | -1,328 |
| Tracadie-Sheila | 7 | 190 | 865 | 957 | 865 | 196 | 1,355 | 1,692 |
| Néguac | 8 | -543 | -170 | -120 | -170 | -540 | 100 | 286 |
| Miramichi | 9 | -4,920 | -3,523 | -3,333 | -3,523 | -4,907 | -2,510 | -1,814 |
| Bouctouche | 10 | -1,664 | -849 | -739 | -849 | -1,656 | -259 | 147 |
| Salisbury | 11 | -431 | -107 | -63 | -107 | -428 | 128 | 289 |
| Shediac | 12 | 2,226 | 3,772 | 3,982 | 3,772 | 2,240 | 4,893 | 5,664 |
| Sackville | 13 | -2,346 | -1,969 | -1,917 | -1,969 | -2,342 | -1,695 | -1,507 |
| Riverview | 14.1 | 1,638 | 2,832 | 2,994 | 2,832 | 1,649 | 3,697 | 4,292 |
| Moncton | 14.2 | 10,193 | 14,444 | 15,022 | 14,444 | 10,231 | 17,526 | 19,645 |
| Dieppe | 14.3 | 6,942 | 8,661 | 8,894 | 8,661 | 6,958 | 9,907 | 10,764 |
| Hillsborough | 15 | -1,153 | -972 | -948 | -972 | -1,151 | -842 | -752 |
| Sussex | 16 | -2,910 | -1,998 | -1,874 | -1,998 | -2,901 | -1,337 | -882 |
| Minto | 17 | -1,756 | -1,426 | -1,381 | -1,426 | -1,753 | -1,187 | -1,022 |
| Saint John | 18.1 | -11,101 | -8,241 | -7,852 | -8,241 | -11,075 | -6,167 | -4,742 |
| Grand Bay-Westfield | 18.2 | -1,755 | -1,386 | -1,335 | -1,386 | -1,751 | -1,118 | -934 |
| Quispamsis | 18.3 | -974 | 847 | 1,095 | 847 | -957 | 2,167 | 3,075 |
| St. George | 19 | -1,422 | -978 | -917 | -978 | -1,418 | -655 | -434 |
| St. Stephen | 20 | -3,273 | -2,754 | -2,683 | -2,754 | -3,268 | -2,377 | -2,118 |
| Oromocto | 21 | -1,686 | -923 | -820 | -923 | -1,679 | -371 | 10 |
| Fredericton | 22.1 | 5,828 | 8,774 | 9,175 | 8,774 | 5,855 | 10,911 | 12,380 |
| New Maryland | 22.2 | 3,995 | 5,450 | 5,648 | 5,450 | 4,008 | 6,505 | 7,230 |
| Nackawic | 23 | -1,547 | -1,102 | -1,041 | -1,102 | -1,543 | -779 | -557 |
| Douglas | 24 | -880 | -201 | -109 | -201 | -874 | 291 | 629 |
| Florenceville-Bristol | 25 | -3,684 | -2,637 | -2,495 | -2,637 | -3,675 | -1,878 | -1,356 |
| Perth-Andover | 26 | -2,695 | -2,388 | -2,346 | -2,388 | -2,693 | -2,165 | -2,012 |
| Grand Falls | 27 | -3,152 | -2,568 | -2,489 | -2,568 | -3,146 | -2,145 | -1,854 |
| Edmundston | 28 | -2,650 | -1,549 | -1,399 | -1,549 | -2,640 | -750 | -201 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 16: Forecast population change by Census Metropolitan Area (2011–2016 base period), LIN_EXP method

| Census Metropolitan Area | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|------------|------------|---------|---------|---------|---------|---------|-------------|
| Moncton | 305 | 17,779 | 25,307 | 26,330 | 25,307 | 17,848 | 30,765 | 34,517 |
| Saint John | 310 | -14,139 | -8,939 | -8,232 | -8,939 | -14,091 | -5,169 | -2,577 |
| Fredericton | 320 | 11,134 | 16,366 | 17,077 | 16,366 | 11,181 | 20,160 | 22,768 |
| Bathurst | 328 | -3,992 | -2,749 | -2,580 | -2,749 | -3,981 | -1,847 | -1,227 |
| Miramichi | 329 | -2,984 | -1,843 | -1,688 | -1,843 | -2,973 | -1,015 | -447 |
| Campbellton (New Brunswick part) | 330 | -3,646 | -3,201 | -3,140 | -3,201 | -3,642 | -2,878 | -2,656 |
| Edmundston | 335 | -2,031 | -1,059 | -927 | -1,059 | -2,023 | -354 | 130 |
| Non-CMA | 999 | -35,705 | -24,367 | -22,825 | -24,367 | -35,602 | -16,146 | -10,494 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 17: Forecast population change by Health Region (2011–2016 base period), LIN_EXP method

| Health Region | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-------------|------------|---------|---------|---------|---------|--------|-------------|
| Zone 1 - Moncton / South-East Area | 1301 | 15,660 | 26,078 | 27,494 | 26,078 | 15,755 | 33,631 | 38,824 |
| Zone 2 - Fundy Shore / Saint John Area | 1302 | -21,382 | -14,454 | -13,512 | -14,454 | -21,320 | -9,430 | -5,977 |
| Zone 3 - Fredericton / River Valley Area | 1303 | -2,905 | 5,045 | 6,126 | 5,045 | -2,833 | 10,810 | 14,773 |
| Zone 4 - Madawaska / North West Area | 1304 | -5,838 | -3,890 | -3,625 | -3,890 | -5,820 | -2,478 | -1,507 |
| Zone 5 - Restigouche Area | 1305 | -6,322 | -5,441 | -5,321 | -5,441 | -6,314 | -4,801 | -4,362 |
| Zone 6 - Bathurst / Acadian Peninsula Area | 1306 | -7,433 | -4,232 | -3,797 | -4,232 | -7,404 | -1,911 | -316 |

| Health Region | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|------------------------------------|-------------|------------|--------|--------|--------|---------|--------|-------------|
| Zone 7 - Miramichi Area | 1307 | -5,364 | -3,590 | -3,349 | -3,590 | -5,348 | -2,304 | -1,419 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 18: Forecast population change by Provincial Electoral District in 2010 (2011–2016 base period), LIN_EXP method

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-----------|------------|--------|--------|--------|--------|--------|-------------|
| Campbellton- Restigouche Centre | 1 | -3,137 | -2,738 | -2,684 | -2,738 | -3,134 | -2,449 | -2,250 |
| Dalhousie- Restigouche East | 2 | -2,767 | -2,346 | -2,288 | -2,346 | -2,763 | -2,040 | -1,830 |
| Nigadoo-Chaleur | 3 | -1,610 | -1,110 | -1,043 | -1,110 | -1,605 | -749 | -500 |
| Bathurst | 4 | -1,681 | -1,221 | -1,159 | -1,221 | -1,677 | -888 | -659 |
| Nepisiguit | 5 | -1,382 | -952 | -894 | -952 | -1,378 | -640 | -426 |
| Caraquet | 6 | -389 | 88 | 153 | 88 | -384 | 434 | 671 |
| Lamèque- Shippagan- Miscou | 7 | -2,033 | -1,654 | -1,603 | -1,654 | -2,029 | -1,380 | -1,191 |
| Centre- Péninsule-Saint- Sauveur | 8 | -1,023 | -556 | -493 | -556 | -1,019 | -218 | 14 |
| Tracadie-Sheila | 9 | -29 | 529 | 604 | 529 | -24 | 932 | 1,210 |
| Miramichi-Bay- Neguac | 10 | -737 | -233 | -165 | -233 | -732 | 132 | 383 |
| Miramichi-Bay du Vin | 11 | -1,749 | -1,328 | -1,271 | -1,328 | -1,745 | -1,023 | -813 |
| Miramichi Centre | 12 | -902 | -420 | -355 | -420 | -898 | -71 | 170 |
| Southwest Miramichi | 13 | -2,265 | -1,889 | -1,838 | -1,889 | -2,262 | -1,617 | -1,429 |
| Rogersville- Kouchibouguac | 14 | -1,215 | -764 | -702 | -764 | -1,211 | -437 | -212 |
| Kent | 15 | -315 | 228 | 302 | 228 | -310 | 622 | 893 |
| Kent SouthKent- Sud | 16 | -1,225 | -607 | -523 | -607 | -1,219 | -159 | 149 |
| Shediac-Cap-Pelé | 17 | 3,022 | 3,912 | 4,033 | 3,912 | 3,030 | 4,558 | 5,002 |
| Tantramar | 18 | -2,303 | -1,932 | -1,882 | -1,932 | -2,300 | -1,663 | -1,479 |
| Memramcook- Lakeville-Dieppe | 19 | 5,096 | 6,035 | 6,163 | 6,035 | 5,105 | 6,716 | 7,184 |
| Dieppe Centre- Lewisville | 20 | 2,173 | 3,299 | 3,452 | 3,299 | 2,183 | 4,115 | 4,676 |
| Moncton East | 21 | 828 | 1,605 | 1,711 | 1,605 | 835 | 2,169 | 2,556 |

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-------|------------|--------|--------|--------|--------|--------|-------------|
| Moncton West | 22 | -834 | -218 | -135 | -218 | -828 | 228 | 534 |
| Moncton North | 23 | -1,377 | -801 | -723 | -801 | -1,371 | -383 | -96 |
| Moncton Crescent | 24 | 10,311 | 11,863 | 12,074 | 11,863 | 10,325 | 12,989 | 13,762 |
| Petitcodiac | 25 | -578 | 147 | 246 | 147 | -572 | 673 | 1,034 |
| Riverview | 26 | -543 | 122 | 212 | 122 | -537 | 603 | 935 |
| Albert | 27 | 907 | 1,596 | 1,690 | 1,596 | 913 | 2,096 | 2,440 |
| Kings-East | 28 | -1,453 | -856 | -774 | -856 | -1,448 | -422 | -125 |
| Hampton-Kings | 29 | -1,107 | -463 | -375 | -463 | -1,101 | 4 | 325 |
| Quispamsis | 30 | 830 | 1,712 | 1,832 | 1,712 | 838 | 2,352 | 2,792 |
| Saint John-Fundy | 31 | -1,745 | -1,158 | -1,078 | -1,158 | -1,740 | -733 | -440 |
| Rothesay | 32 | -1,415 | -866 | -791 | -866 | -1,410 | -467 | -193 |
| Saint John East | 33 | -2,631 | -2,119 | -2,049 | -2,119 | -2,627 | -1,747 | -1,492 |
| Saint John Harbour | 34 | -1,690 | -1,176 | -1,107 | -1,176 | -1,685 | -804 | -548 |
| Saint John Portland | 35 | -3,125 | -2,583 | -2,510 | -2,583 | -3,120 | -2,191 | -1,920 |
| Saint John Lancaster | 36 | -1,160 | -603 | -527 | -603 | -1,155 | -199 | 78 |
| Fundy-River Valley | 37 | -2,369 | -1,908 | -1,846 | -1,908 | -2,365 | -1,574 | -1,345 |
| Charlotte-The Isles | 38 | -1,605 | -1,119 | -1,053 | -1,119 | -1,601 | -767 | -525 |
| Charlotte-Campobello | 39 | -3,072 | -2,613 | -2,550 | -2,613 | -3,068 | -2,280 | -2,051 |
| Oromocto | 40 | -426 | 250 | 342 | 250 | -419 | 740 | 1,077 |
| Grand Lake-Gagetown | 41 | -2,965 | -2,607 | -2,559 | -2,607 | -2,962 | -2,348 | -2,169 |
| Fredericton-Nashwaaksis | 42 | -1,272 | -652 | -567 | -652 | -1,267 | -202 | 108 |
| Fredericton-Fort Nashwaak | 43 | 4,275 | 5,370 | 5,519 | 5,370 | 4,285 | 6,164 | 6,710 |
| Fredericton-Lincoln | 44 | -1,167 | -462 | -366 | -462 | -1,161 | 49 | 401 |
| Fredericton-Silverwood | 45 | 4,315 | 5,348 | 5,489 | 5,348 | 4,325 | 6,097 | 6,612 |
| New Maryland-Sunbury West | 46 | 2,797 | 3,565 | 3,670 | 3,565 | 2,804 | 4,123 | 4,506 |
| York | 47 | -229 | 365 | 445 | 365 | -224 | 795 | 1,091 |
| York NorthYork-Nord | 48 | -168 | 522 | 615 | 522 | -161 | 1,022 | 1,365 |
| Woodstock | 49 | -1,877 | -1,271 | -1,188 | -1,271 | -1,871 | -831 | -529 |
| Carleton | 50 | -2,380 | -1,930 | -1,869 | -1,930 | -2,376 | -1,603 | -1,379 |

| Provincial Electoral Districts in 2010 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-----------|------------|--------|--------|--------|---------|--------|-------------|
| Victoria-Tobique | 51 | -2,858 | -2,509 | -2,462 | -2,509 | -2,855 | -2,256 | -2,083 |
| Grand Falls-Drummond-Saint-André | 52 | -2,425 | -2,036 | -1,983 | -2,036 | -2,422 | -1,754 | -1,560 |
| Restigouche-la-Vallée | 53 | -966 | -465 | -397 | -465 | -962 | -101 | 149 |
| Edmundston-Saint-Basile | 54 | 1,804 | 2,504 | 2,599 | 2,504 | 1,810 | 3,011 | 3,360 |
| Madawaska-les-Lacs | 55 | -3,744 | -3,377 | -3,327 | -3,377 | -3,741 | -3,111 | -2,928 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Table 19: Forecast population change by Provincial Electoral District in 2014 (2011–2016 base period), LIN_EXP method

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-----------|------------|--------|--------|--------|--------|--------|-------------|
| Restigouche West | 1 | -2,078 | -1,511 | -1,434 | -1,511 | -2,073 | -1,100 | -817 |
| Campbellton-Dalhousie | 2 | -3,704 | -3,225 | -3,160 | -3,225 | -3,700 | -2,878 | -2,639 |
| Restigouche-Chaleur | 3 | -1,954 | -1,411 | -1,338 | -1,411 | -1,949 | -1,018 | -747 |
| Bathurst West-Beresford | 4 | -1,905 | -1,350 | -1,275 | -1,350 | -1,900 | -947 | -671 |
| Bathurst East-Nepisiguit-Saint-Isidore | 5 | -2,312 | -1,792 | -1,722 | -1,792 | -2,307 | -1,416 | -1,157 |
| Caraquet | 6 | -299 | 288 | 368 | 288 | -294 | 714 | 1,007 |
| Shippagan-Lamèque-Miscou | 7 | -2,395 | -1,906 | -1,839 | -1,906 | -2,390 | -1,551 | -1,307 |
| Tracadie-Sheila | 8 | 82 | 750 | 840 | 750 | 88 | 1,233 | 1,566 |
| Miramichi Bay-Neguac | 9 | -717 | -57 | 33 | -57 | -711 | 421 | 750 |
| Miramichi | 10 | -1,601 | -1,022 | -944 | -1,022 | -1,596 | -603 | -314 |
| Southwest Miramichi-Bay du Vin | 11 | -2,542 | -2,018 | -1,947 | -2,018 | -2,537 | -1,638 | -1,377 |
| Kent North | 12 | -1,546 | -907 | -820 | -907 | -1,540 | -444 | -126 |
| Kent South | 13 | -1,443 | -802 | -715 | -802 | -1,437 | -338 | -19 |
| Shediac Bay-Dieppe | 14 | 5,360 | 6,413 | 6,556 | 6,413 | 5,369 | 7,177 | 7,702 |

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-----------|------------|--------|--------|--------|--------|--------|-------------|
| Shediac-Beaubassin-Cap-Pelé | 15 | 3,032 | 3,920 | 4,040 | 3,920 | 3,040 | 4,563 | 5,005 |
| Memramcook-Tantramar | 16 | -2,765 | -2,185 | -2,107 | -2,185 | -2,760 | -1,765 | -1,476 |
| Dieppe | 17 | 2,338 | 3,141 | 3,250 | 3,141 | 2,345 | 3,723 | 4,123 |
| Moncton East | 18 | 1,823 | 2,666 | 2,780 | 2,666 | 1,831 | 3,277 | 3,697 |
| Moncton Centre | 19 | -332 | 371 | 466 | 371 | -326 | 880 | 1,231 |
| Moncton South | 20 | -1,551 | -925 | -840 | -925 | -1,545 | -471 | -159 |
| Moncton Northwest | 21 | 7,412 | 8,568 | 8,725 | 8,568 | 7,422 | 9,406 | 9,982 |
| Moncton Southwest | 22 | 1,892 | 2,718 | 2,830 | 2,718 | 1,899 | 3,317 | 3,729 |
| Riverview | 23 | -567 | 96 | 186 | 96 | -561 | 576 | 906 |
| Albert | 24 | 1,181 | 1,991 | 2,101 | 1,991 | 1,189 | 2,578 | 2,982 |
| Gagetown-Petitcodiac | 25 | -2,534 | -1,921 | -1,838 | -1,921 | -2,528 | -1,477 | -1,171 |
| Sussex-Fundy-St. Martins | 26 | -2,024 | -1,398 | -1,312 | -1,398 | -2,018 | -943 | -631 |
| Hampton | 27 | -77 | 666 | 767 | 666 | -70 | 1,204 | 1,574 |
| Quispamsis | 28 | 567 | 1,340 | 1,445 | 1,340 | 574 | 1,901 | 2,286 |
| Rothsay | 29 | -2,342 | -1,785 | -1,710 | -1,785 | -2,337 | -1,382 | -1,104 |
| Saint John East | 30 | -96 | 605 | 701 | 605 | -90 | 1,114 | 1,463 |
| Portland-Simonds | 31 | -3,761 | -3,191 | -3,114 | -3,191 | -3,756 | -2,778 | -2,495 |
| Saint John Harbour | 32 | -3,459 | -2,918 | -2,845 | -2,918 | -3,454 | -2,526 | -2,256 |
| Saint John Lancaster | 33 | -1,271 | -698 | -620 | -698 | -1,266 | -282 | 3 |
| Kings Centre | 34 | -1,332 | -743 | -663 | -743 | -1,327 | -316 | -22 |
| Fundy-The Isles-Saint John West | 35 | -2,450 | -1,877 | -1,800 | -1,877 | -2,445 | -1,462 | -1,176 |
| Charlotte-Campobello | 36 | -3,629 | -3,064 | -2,988 | -3,064 | -3,624 | -2,655 | -2,374 |
| Oromocto-Lincoln | 37 | -126 | 789 | 913 | 789 | -118 | 1,453 | 1,909 |
| Fredericton-Grand Lake | 38 | -1,207 | -574 | -488 | -574 | -1,201 | -115 | 201 |
| New Maryland-Sunbury | 39 | 4,957 | 6,018 | 6,162 | 6,018 | 4,966 | 6,788 | 7,317 |
| Fredericton South | 40 | -475 | 206 | 299 | 206 | -469 | 699 | 1,039 |
| Fredericton North | 41 | -604 | 77 | 169 | 77 | -598 | 570 | 909 |

| Provincial Electoral Districts in 2014 | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|-----------|------------|--------|--------|--------|---------|--------|-------------|
| Fredericton-York | 42 | 2,606 | 3,500 | 3,621 | 3,500 | 2,614 | 4,147 | 4,593 |
| Fredericton West-Hanwell | 43 | 1,763 | 2,628 | 2,745 | 2,628 | 1,771 | 3,255 | 3,686 |
| Carleton-York | 44 | -2,472 | -1,826 | -1,738 | -1,826 | -2,466 | -1,357 | -1,035 |
| Carleton | 45 | -1,582 | -949 | -863 | -949 | -1,576 | -491 | -175 |
| Carleton-Victoria | 46 | -4,041 | -3,531 | -3,462 | -3,531 | -4,036 | -3,162 | -2,908 |
| Victoria-La Vallée | 47 | -3,236 | -2,699 | -2,626 | -2,699 | -3,231 | -2,309 | -2,041 |
| Edmundston-Madawaska Centre | 48 | 1,914 | 2,668 | 2,771 | 2,668 | 1,921 | 3,215 | 3,591 |
| Madawaska Les Lacs-Edmundston | 49 | -4,086 | -3,614 | -3,550 | -3,614 | -4,081 | -3,272 | -3,037 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

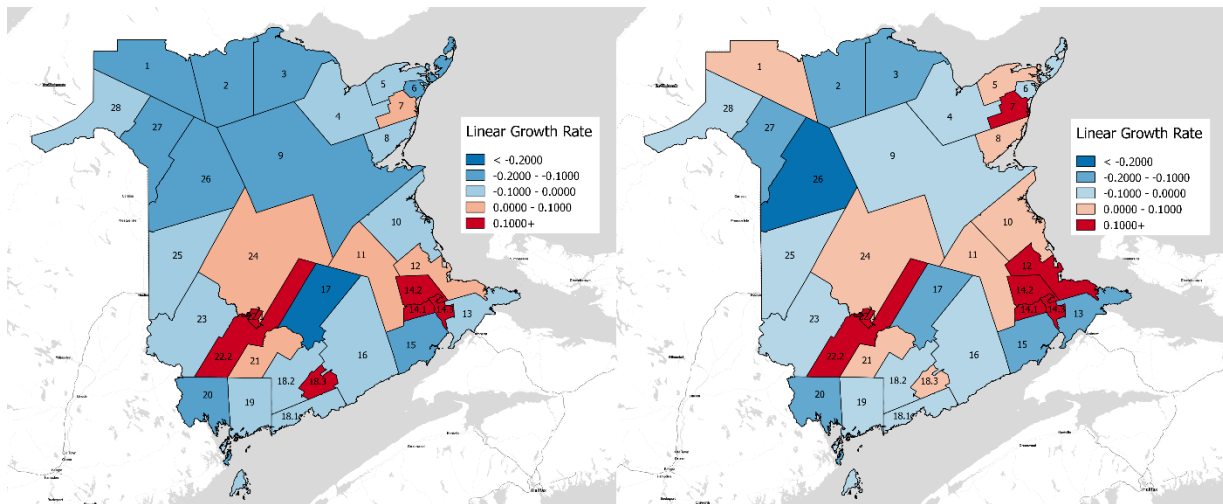
Table 20: Forecast population change by Regional Service Commission (2011–2016 base period), LIN_EXP method

| Regional Service Commission | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|--|----------|------------|--------|--------|--------|--------|--------|-------------|
| Northwest Regional Service Commission | 1 | -5,931 | -4,011 | -3,750 | -4,011 | -5,914 | -2,619 | -1,662 |
| Restigouche Regional Service Commission | 2 | -6,321 | -5,413 | -5,290 | -5,413 | -6,313 | -4,755 | -4,303 |
| Chaleur Regional Service Commission | 3 | -4,544 | -3,118 | -2,924 | -3,118 | -4,531 | -2,084 | -1,373 |
| Acadian Peninsula Regional Service Commission | 4 | -3,817 | -1,762 | -1,482 | -1,762 | -3,799 | -271 | 754 |
| Greater Miramichi Regional Service Commission | 5 | -5,401 | -3,831 | -3,617 | -3,831 | -5,387 | -2,693 | -1,910 |
| Kent Regional Service Commission | 6 | -2,736 | -1,343 | -1,153 | -1,343 | -2,723 | -333 | 361 |
| Southeast Regional Service Commission | 7 | 17,647 | 26,743 | 27,979 | 26,743 | 17,730 | 33,337 | 37,871 |

| Regional Service Commission | Label | Low Growth | M1 | M2 | M3 | M4 | M5 | High Growth |
|---|-----------|------------|--------|--------|--------|---------|--------|-------------|
| Regional Service Commission 8 | 8 | -2,839 | -1,622 | -1,456 | -1,622 | -2,828 | -739 | -132 |
| Fundy Regional Service Commission | 9 | -13,735 | -9,006 | -8,363 | -9,006 | -13,693 | -5,577 | -3,220 |
| Southwest New Brunswick Service Commission | 10 | -5,344 | -4,257 | -4,109 | -4,257 | -5,334 | -3,469 | -2,927 |
| Regional Service Commission 11 | 11 | 6,088 | 12,455 | 13,321 | 12,455 | 6,146 | 17,072 | 20,247 |
| Regional Service Commission 12 | 12 | -6,650 | -5,319 | -5,138 | -5,319 | -6,638 | -4,354 | -3,691 |
| New Brunswick | | -33,584 | -484 | 4,016 | -484 | -33,284 | 23,516 | 40,016 |

Appendix C: Maps for annualized growth rate from 2016-2036 in selection of alternate geographies

Map 6: Population change by Health Council Communities (2016-2036) with high-growth scenario; LIN_EXP method using 2006-2016 as a base period (left) and 2011-2016 as a base period (right)



Map 7: Population change by Provincial Electoral Districts in 2014 (2016-2036) with high-growth scenario; LIN_EXP method using 2006-2016 as a base period (left) and 2011-2016 as a base period (right)

