

POPULATION GROWTH IN THE GVRD TO 4 MILLION: METHOD.

POPULATION GROWTH IN THE GVRD TO 4 MILLION: MUNICIPALITIES

Method:

With the GVRD municipalities population estimates from 1994 and 2004¹ the population growth in the last 10 years is obtained, within each municipality.

Considering the last 10 years growth as the current population growth (people/year), and considering it a steady growth in future years, the year by when the GVRD will reach a population of 4 million is obtained by the following equation:

$$\text{Equation 1: } 2004 \text{ population (p) + growth rate (p/yr) * time (yr) = 4 million (p)}$$

$$\text{time (yr) = (4 million (p) - 2004 population (p)) / growth rate (p/yr)}$$

So by 2061, with the steady current population growth the GVRD will reach a population of 4 million.

Taking the Population Projections for the year 2021 by the GVRD², on one side, and by the municipalities (in their OCPs³), on the other, and adding some missing municipalities as well as the Electoral Area and the Indian Reserves, the 2021 population projection is of 2,771,760 and of 2,751,137, respectively. In this same way, using the GVRD's Population Projections for 2031, the projected population is of 3,060,397.

Considering the projected population for 2021 from the OCPs, the resulting growth of people/year is higher than the current one (GVRD current growth: 32,928 p/yr, and GVRD projected growth: 36,371 p/yr). In the same way as with equation 1, the year when the GVRD reaches a population of 4 million is obtained. As the projected growth rate is somewhat higher than the current growth, the 4 million population is reached some years before.

$$\text{Equation 2: } 2004 \text{ population (p) + projected growth rate (p/yr) * time (yr) = 4 million (p)}$$

$$\text{time (yr) = (4 million (p) - 2004 population (p)) / projected growth rate (p/yr)}$$

So by 2056, with the steady projected population growth, the GVRD will reach a population of 4 million.

¹ Municipalities, Land Area, 2004 Population Estimates:
<http://www.gvrd.bc.ca/growth/keyfacts/municipalities.htm>

GVRD Population Estimates 1992-2004:
<http://www.gvrd.bc.ca/growth/keyfacts/popest.htm>

² GVRD Population Projection 2005 -2031 (by Local Health Areas):
<http://www.gvrd.bc.ca/growth/keyfacts/popproj.htm>

³ OCP s: Anmore, Belcarra, Bowen Island, Burnaby, Coquitlam, Delta, Langley City, Langley Township, Lion's Bay, Maple Ridge, New Westminster, North Vancouver City, Pitt Meadows, Port Coquitlam, Port Moody, Richmond, Surrey, West Vancouver, White Rock.

POPULATION GROWTH IN THE GVRD TO 4 MILLION: GRID

Method:

With a 5km x 5km grid on the GVRD, the 2056 population projections for each municipality, and the GVRD Green Zone Map⁴ as a limit for urban development, the population projections for each grid cell have been made.

The assumptions to arrive to the projected population of each cell have been the following: Within each municipality, assume the same population growth within its possible growing area. The possible growing area is assumed as the total municipality land area without Green Zone Areas, Agricultural Lands in the Green Zone, Areas under municipal consideration, Wetland Areas and Tidal Flats.

The only exception to this method of equally dividing the population growth in the possible growing area of each municipality (and adding it up in those cells which contained more than one) has been Vancouver. The GVRD 2021 population projections⁵ for different parts of the city have been used to arrive to 2056 projections, in the same way as with the other municipalities.

The grid leaves out Bowen Island, Lions Bay, the Electoral Area and the Indian Reserves.

⁴ Green Zone map, GVRD 2001 Census Maps, <http://www.gvrd.bc.ca/growth/maps.htm>

⁵ GVRD Population Projection 2005 -2031 (by Local Health Areas):
<http://www.gvrd.bc.ca/growth/keyfacts/popproj.htm>