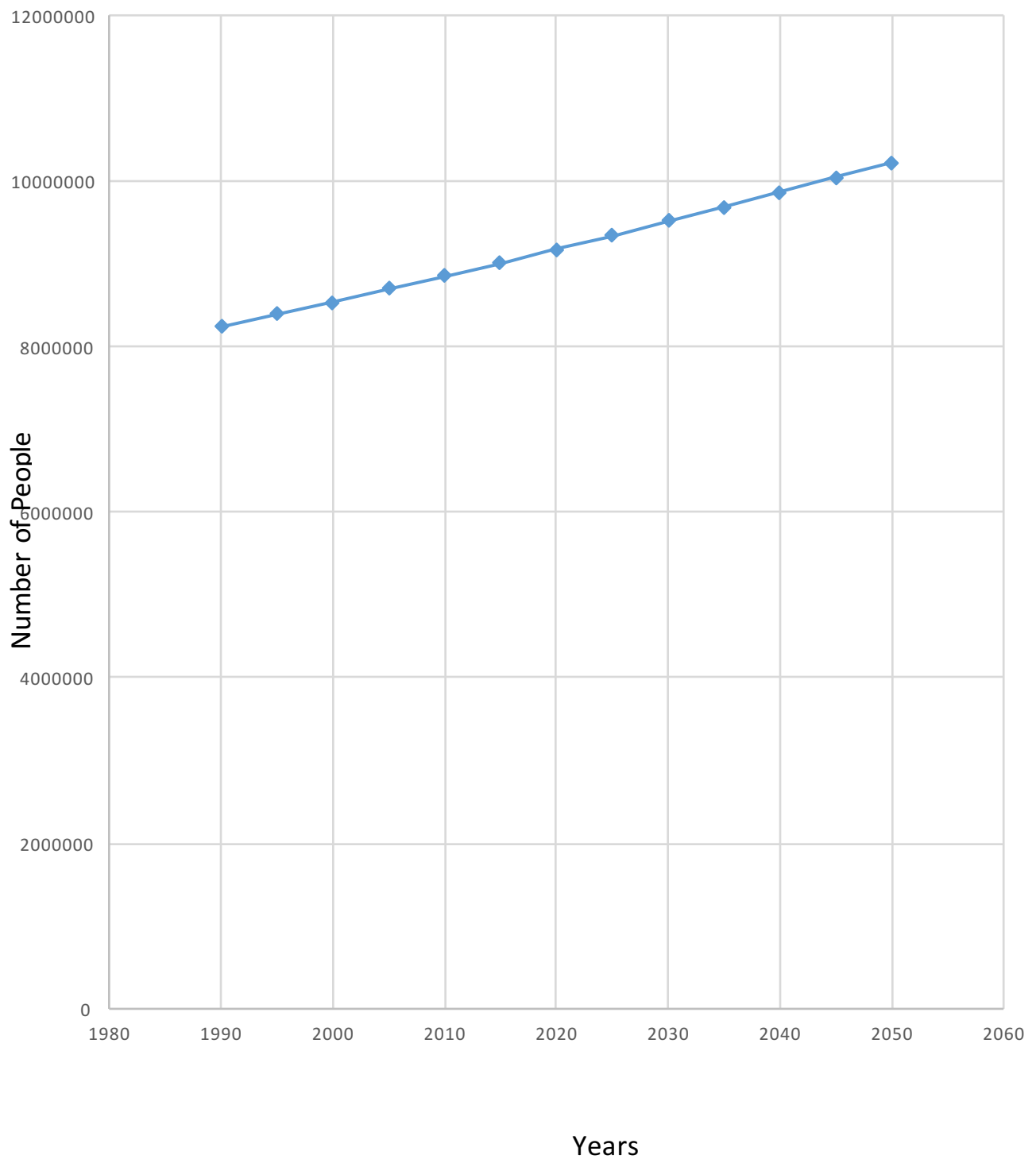


Population of Mexico City



John Chase  
ENGR 115  
September 16, 2016

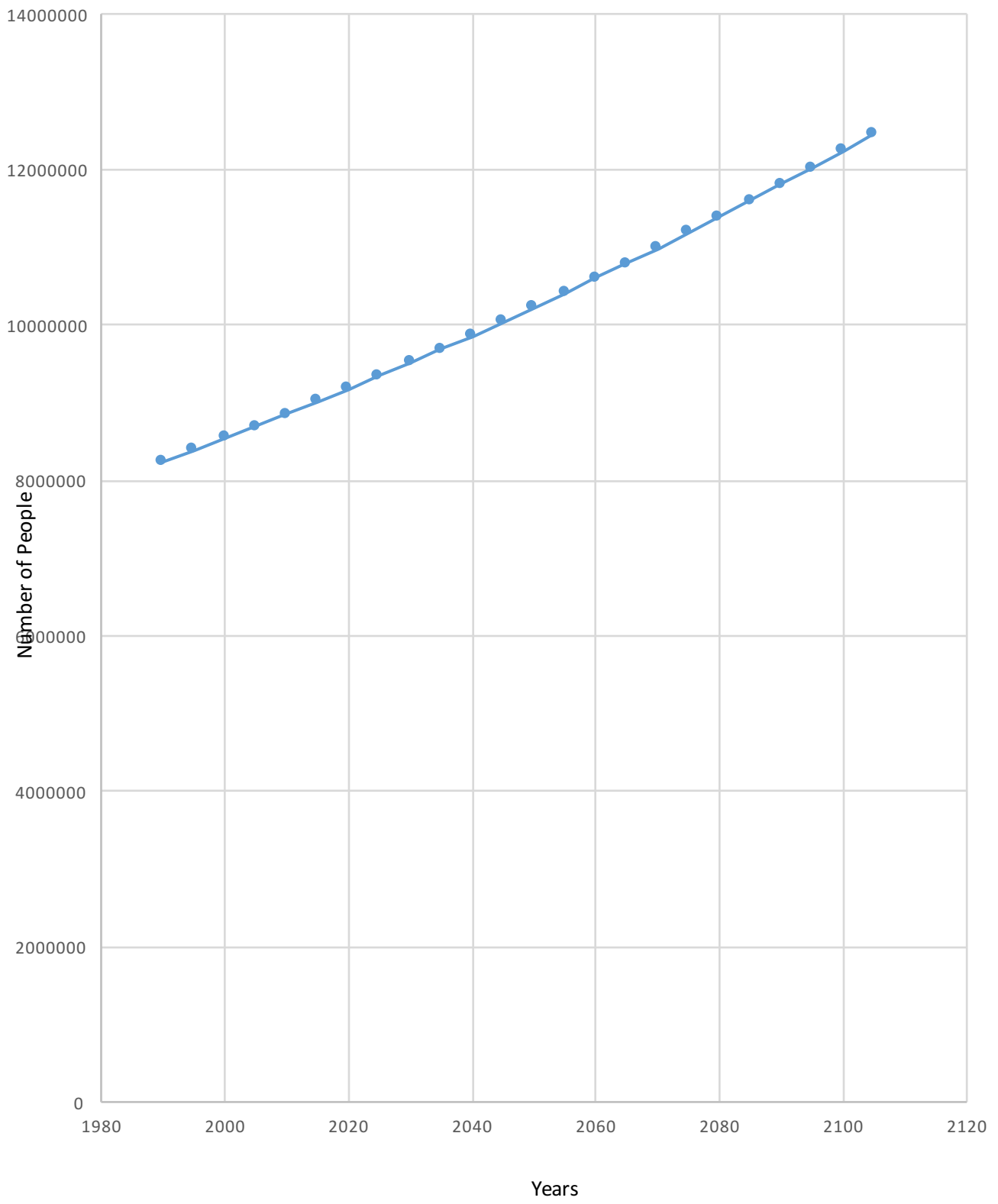
Input parameters:	
Location:	Mexico City <a href="http://www.google.com/publicdata/expire?ds=z83fj27m8fa7gq_&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en">http://www.google.com/publicdata/expire?ds=z83fj27m8fa7gq_&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en</a>
Data Reference:	<a href="http://www.google.com/publicdata/expire?ds=z83fj27m8fa7gq_&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en">en</a>
Model Start Year:	1990
Model End Year:	2010
Time:	5
Population Start:	8236000
Final Population	8851000
Growth Rate:	0.0036

Year:	Time/Year	Pop Estimate	
	1990	0	8236000 16472000
	1995	5	8385590.274
	2000	10	8537897.552
	2005	15	8692971.183
	2010	20	8850861.414
	2015	25	9011619.401
	2020	30	9175297.231
	2025	35	9341947.938
	2030	40	9511625.518
	2035	45	9684384.948
	2040	50	9860282.203
	2045	55	10039374.28
	2050	60	10221719.19
	2055	65	10407376.04
	2060	70	10596404.96
	2065	75	10788867.22
	2070	80	10984825.16
	2075	85	11184342.28
	2080	90	11387483.22
	2085	95	11594313.81
	2090	100	11804901.06

2095	105	12019313.2
2100	110	12237619.7
2105	115	12459891.3
2110	120	12686200.01
2115	125	12916619.16
2120	130	13151223.41
2125	135	13390088.77
2130	140	13633292.63
2135	145	13880913.81
2140	150	14133032.52
2145	155	14389730.45
2150	160	14651090.79
2155	165	14917198.2
2160	170	15188138.92
2165	175	15464000.73
2170	180	15744873.01
2175	185	16030846.77
2180	190	16322014.66
2185	195	16618471.03
2190	200	16920311.92
2195	205	17227635.15
2200	210	17540540.28
2205	215	17859128.7
2210	220	18183503.63

Closest

Log Graph of Mexico City



Input parameters:	
Location:	Mexico City <a href="http://www.google.com/publicdata/explore?ds=z83fj27m8fa7gq&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en">http://www.google.com/publicdata/explore?ds=z83fj27m8fa7gq &amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en</a>
Data Reference:	<a href="#">n</a>
Model Start Year:	1990
Model End Year:	2010
Time:	5
Population Start:	8236000
Final Population	8851000
Growth Rate:	0.0036

Year:	Time/Year	Pop Estimate
1990	0	8236000
1995	5	8385590.271
2000	10	8537897.549
2005	15	8692971.181
2010	20	8850861.411
2015	25	9011619.398
2020	30	9175297.229
2025	35	9341947.936
2030	40	9511625.515
2035	45	9684384.945
2040	50	9860282.2
2045	55	10039374.27
2050	60	10221719.19
2055	65	10407376.04
2060	70	10596404.96
2065	75	10788867.21
2070	80	10984825.15
2075	85	11184342.27
2080	90	11387483.22
2085	95	11594313.81
2090	100	11804901.06
2095	105	12019313.19
2100	110	12237619.7
2105	115	12459891.29

2110	120	12686200.01
2115	125	12916619.16
2120	130	13151223.41
2125	135	13390088.77
2130	140	13633292.63
2135	145	13880913.8
2140	150	14133032.51
2145	155	14389730.45
2150	160	14651090.78
2155	165	14917198.2
2160	170	15188138.92
2165	175	15464000.73
2170	180	15744873.01
2175	185	16030846.76
2180	190	16322014.65
2185	195	16618471.02
2190	200	16920311.92
2195	205	17227635.14
2200	210	17540540.27
2205	215	17859128.69
2210	220	18183503.63
2215	225	18513770.17
2220	230	18850035.34
2225	235	19192408.09
2230	240	19540999.35
2235	245	19895922.06
2240	250	20257291.22
2245	255	20625223.92
2250	260	20999839.38
2255	265	21381258.96
2260	270	21769606.26
2265	275	22165007.11
2270	280	22567589.61
2275	285	22977484.21
2280	290	23394823.71
2285	295	23819743.34
2290	300	24252380.78
2295	305	24692876.2
2300	310	25141372.32
2305	315	25598014.47
2310	320	26062950.61
2315	325	26536331.36
2320	330	27018310.12
2325	335	27509043.05
2330	340	28008689.15

2335	345	28517410.31
2340	350	29035371.36
2345	355	29562740.13

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Input parameters:

Location:	Mexico City
Data Reference:	<a href="http://www.google.com/publicdata/explore?ds=z83fj27m8fa7gq_&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en">http://www.google.com/publicdata/explore?ds=z83fj27m8fa7gq_&amp;met_y=population&amp;idim=state:DF&amp;hl=en&amp;dl=en</a>
Model Start Year:	1990
Model End Year:	2010
Time:	5
Population Start:	8236000
Final Population	8851000
Growth Rate:	0.0034

Year:	Time/Year
=B9	0
=A19+\$B\$11	=B19+\$B\$11
=A20+\$B\$11	=B20+\$B\$11
=A21+\$B\$11	=B21+\$B\$11
=A22+\$B\$11	=B22+\$B\$11
=A23+\$B\$11	=B23+\$B\$11
=A24+\$B\$11	=B24+\$B\$11
=A25+\$B\$11	=B25+\$B\$11
=A26+\$B\$11	=B26+\$B\$11
=A27+\$B\$11	=B27+\$B\$11
=A28+\$B\$11	=B28+\$B\$11
=A29+\$B\$11	=B29+\$B\$11
=A30+\$B\$11	=B30+\$B\$11



#### Pop Estimate

=B\$12\*EXP(B\$14\*B19)

=B\$12\*EXP(B\$14\*B20)

=B\$12\*EXP(B\$14\*B21)

=B\$12\*EXP(B\$14\*B22)

=B\$12\*EXP(B\$14\*B23)

=B\$12\*EXP(B\$14\*B24)

=B\$12\*EXP(B\$14\*B25)

=B\$12\*EXP(B\$14\*B26)

=B\$12\*EXP(B\$14\*B27)

=B\$12\*EXP(B\$14\*B28)

=B\$12\*EXP(B\$14\*B29)

=B\$12\*EXP(B\$14\*B30)

=B\$12\*EXP(B\$14\*B31)

Questions:

- 1.) In my calculations I calculated that the population would double in 192 years. According to my graph the population doubled in a little over 190 years, so my estimate was correct.
- 2.) I think that Mexico City has reached its carrying capacity right now. They should maintain the population they have by, limiting new structure within the city.
- 3.) It seems like a good model for a short period of time, I believe it would lose accuracy over a long period of time due to too many unknown variables.