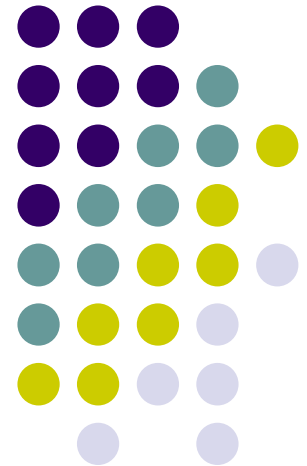


Vital Statistics and Components of Population Change

Nebraska State Data Center Summer Conference

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Thursday, August 14, 2008



A population changes in 2 ways . . .



- Natural Change
 - How many births and deaths are occurring
 - Births > Deaths = Natural Increase (Gain)
 - Births < Deaths = Natural Decrease (Loss)
- Net migration
 - How many people are moving into & out of an area
 - Inmigrants > Outmigrants = Net Inmigration (Gain)
 - Inmigrants < Outmigrants = Net Outmigration (Loss)

Migration is a somewhat complex topic . . .



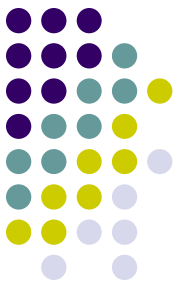
- People are moving (changing living quarters) often these days
 - 18.5% of Nebraskan's moved in the last year; 23.2% for Lancaster County (2006 ACS)
- There are various types of moves
 - Local (within the same geography)
 - Across boundaries in the U.S.
 - State to State; County to County
 - Called Domestic or Internal migration
 - International



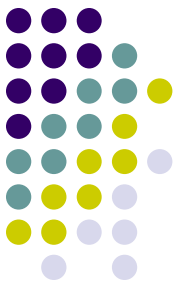
Migration Considerations

- Movement within the same geography doesn't affect population totals
 - One part of a city to another
 - For a state, movement from one county to another
- Regional implications to domestic migration
 - Inmigrant from Iowa may have different characteristics than one from New York (age, culture, driving)
- People leaving the U.S. permanently to live in another country aren't counted by our Census

More migration considerations



- Military movements (international vs. domestic)
- Legal vs. illegal international migration
 - Census doesn't usually distinguish, just counts "people" in most data; most "illegal" data for U.S.
- Inmigrants from abroad may live in another state before relocating locally
 - That'd be one international and one domestic move
- Special cases: adoptions, refugees, prisoners, etc. – How quickly are they accounted for?

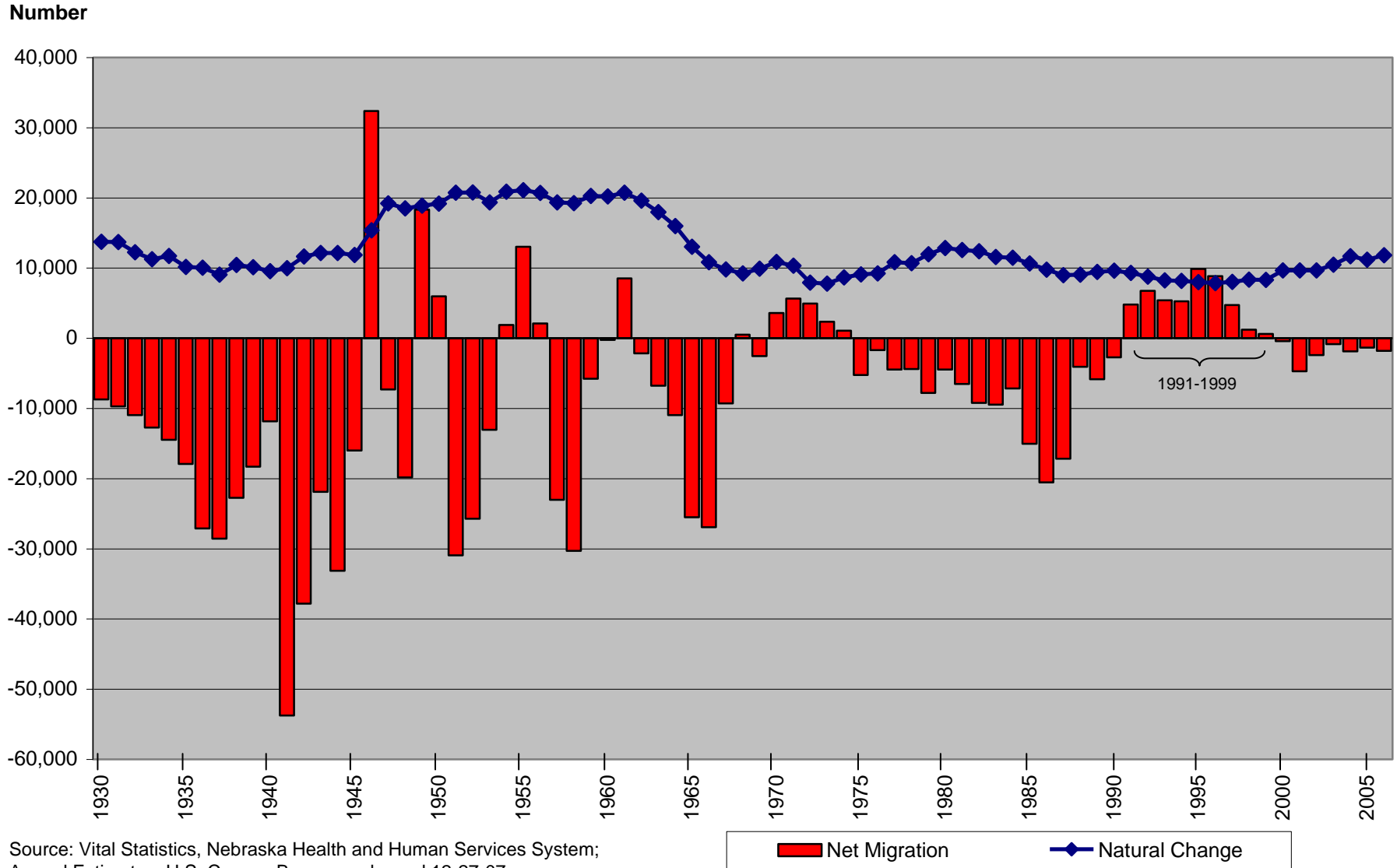


Census migration data

- Census 2000: Asked about residence 5 yrs ago
- ACS: Annually asks about residence 1 yr ago
 - Many tables and crosstabulations provided, PUMS
- Estimates program: shows county and state domestic and international totals since 2000
- Census 2010: Will not ask directly, will be able to calculate for the decade based on birth and death totals
- Other surveys and specialized products

Net Migration VS. Natural Change

Figure 2: Nebraska Components of Population Change: 1930 to 2006

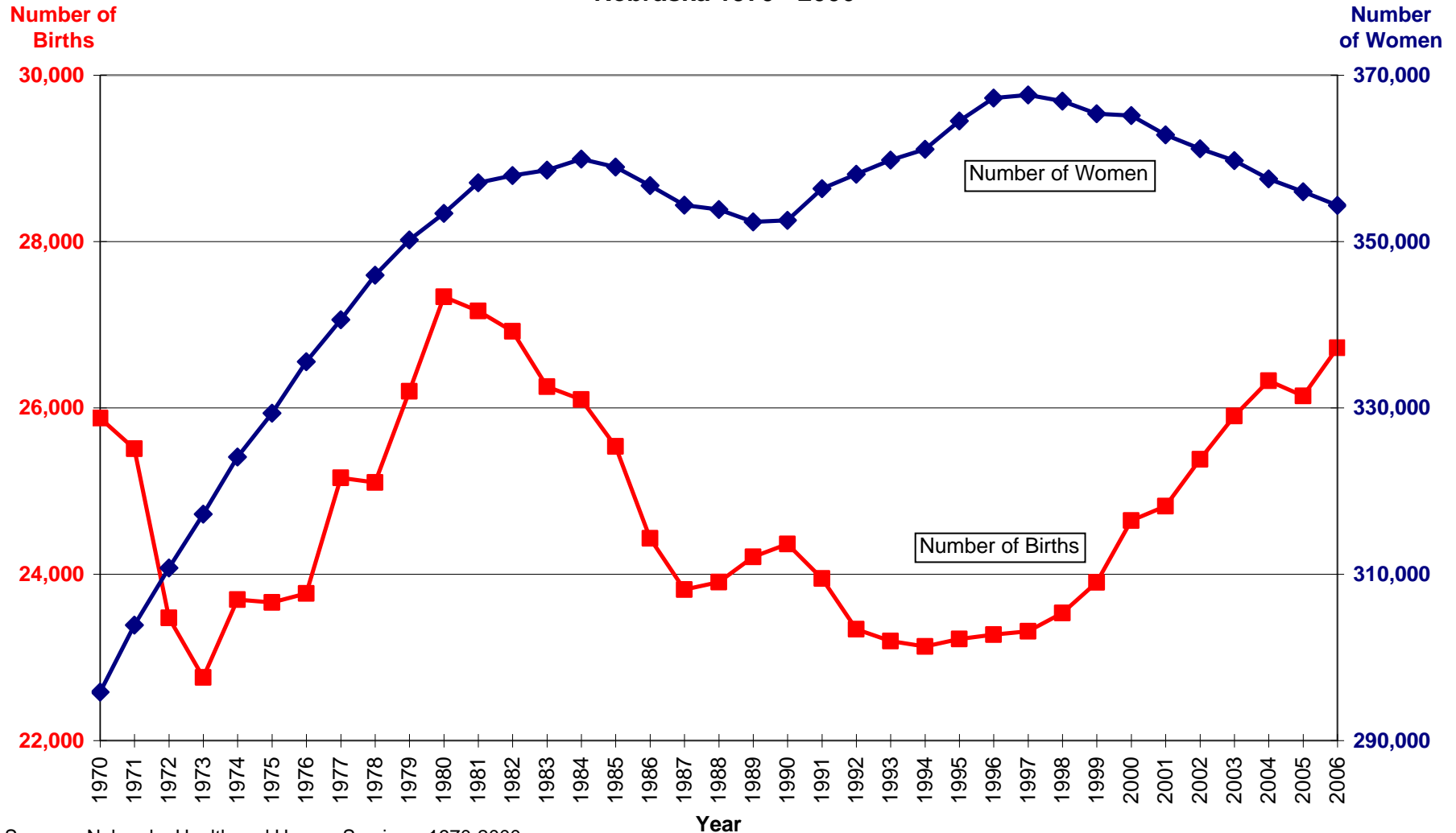


Source: Vital Statistics, Nebraska Health and Human Services System; Annual Estimates, U.S. Census Bureau - released 12-27-07

Net migration often negative, natural increase every year, NM > NC in 95, 96

Births (& Natural Change) are at their highest levels in 25 years (1982)

Figure 4: Comparison of the Number of Births to the Number of Women Age 15-44:
Nebraska 1970 - 2006



Sources: Nebraska Health and Human Services, 1970-2000
Decennial Censuses and Annual Estimates Program
(released 5-1-08), U.S. Census Bureau

■ Number of Births ◆ Number of Women Age 15-44

But women of reproductive age have declined, so why are births up??

Birth rates vary by mom's age

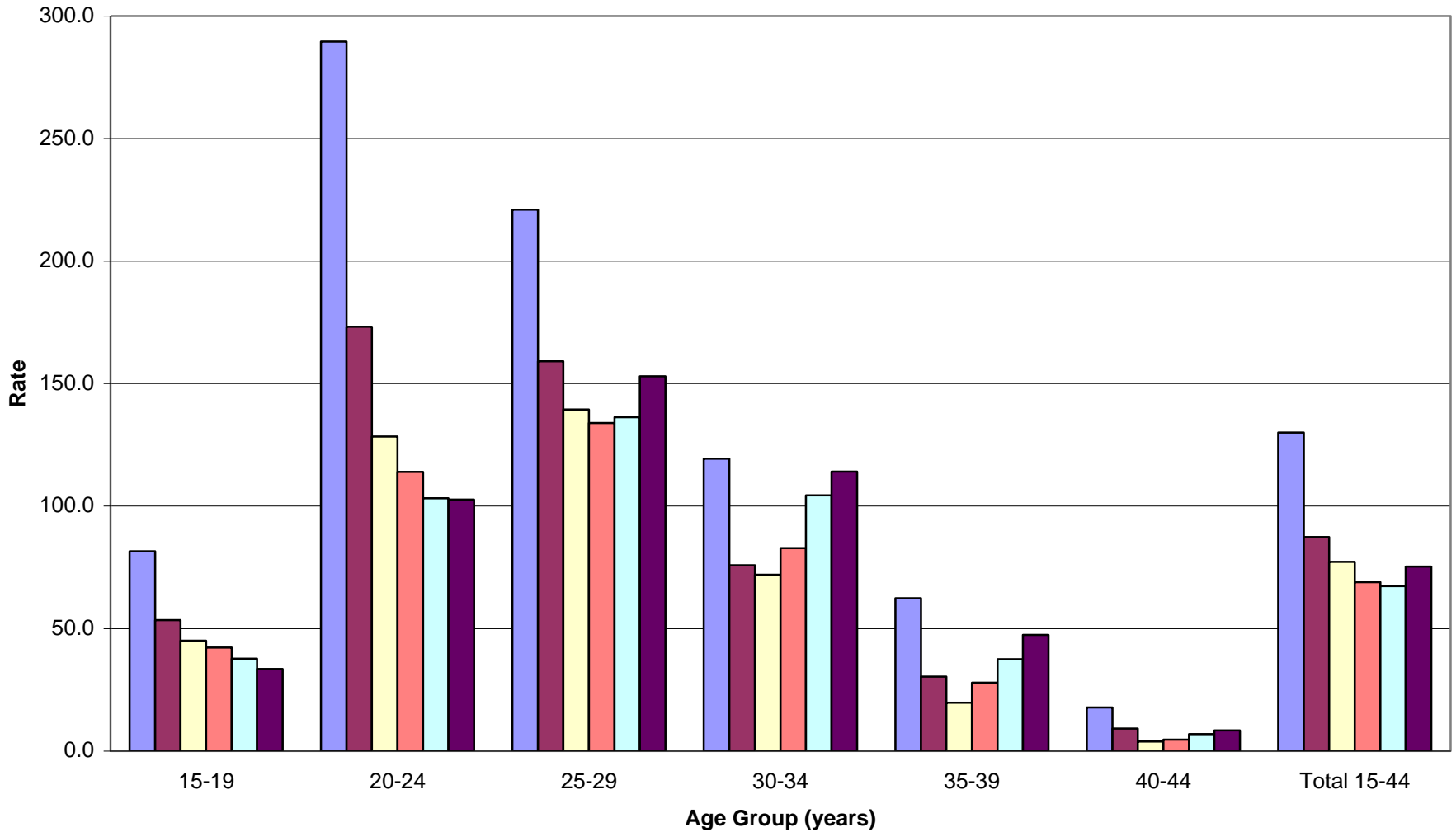
(2006 Nebraska Data)



<u>Age Group</u>	<u>2006 Birth Rate*</u>	<u>2006 Births</u>
15-19	33.5	2,111
20-24	102.6	6,820
25-29	152.9	8,566
30-34	114.0	6,058
35-39	47.4	2,592
40-44	8.4	512

* Birth rate=Births per 1,000 women (of that age)
Use official counts/estimates program, not ACS.

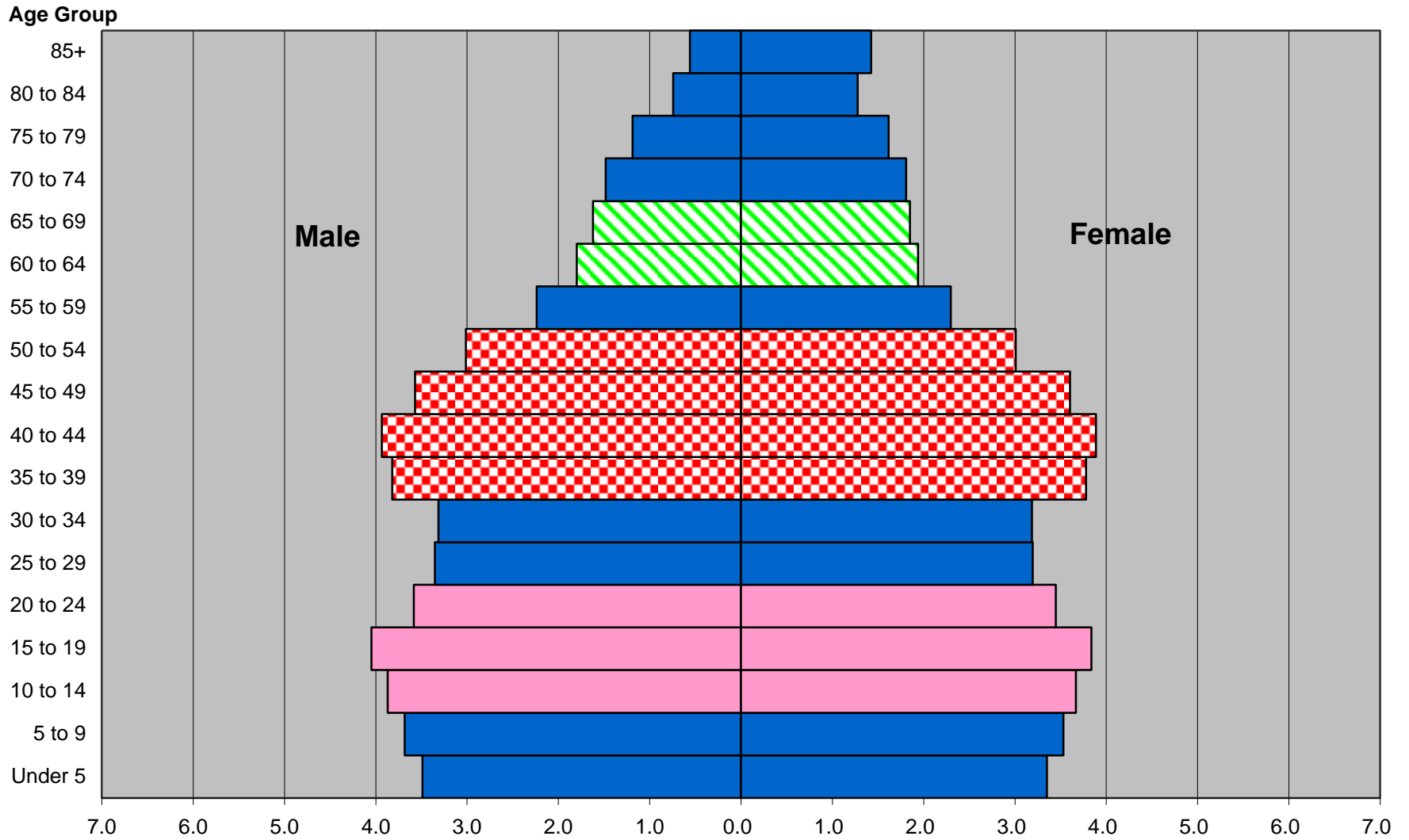
**Figure 6c: Comparison of Nebraska Birth and Fertility Rates by Age Group of Mother:
1960 - 2006 (Births per 1,000 Women in Age Category)**



Sources: 1960 CDC Natality Report; NE Health and Human Services Special Tabulation; Decennial Censuses and Estimates Program (Rel. 5-1-08), U.S. Census Bureau

1960 1970 1980 1990 2000 2006

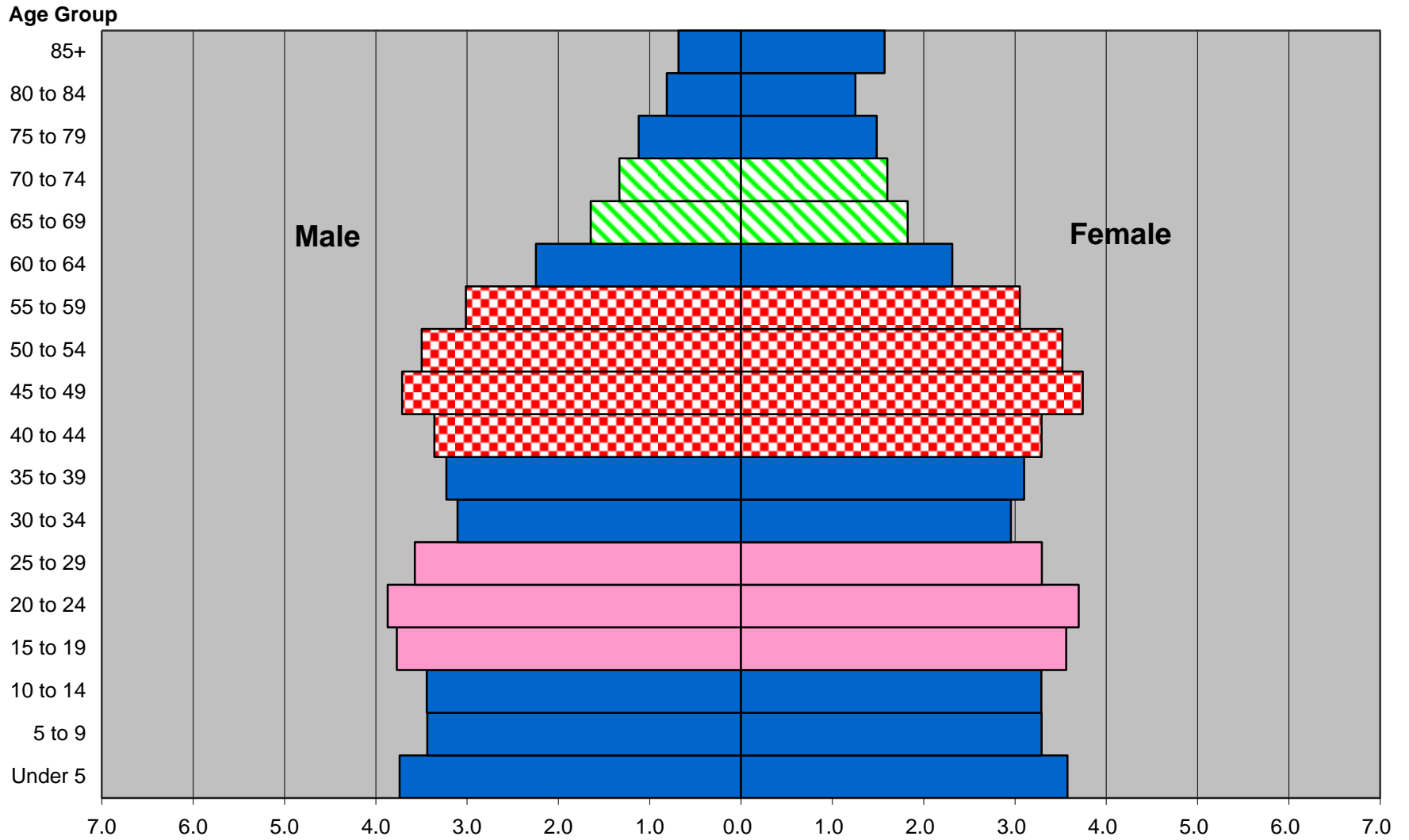
2000 Nebraska Population by Sex and Five-Year Age Group



Source: Decennial Census, U.S. Census Bureau

Green lines depict the depression cohort; red checker shows the "baby boom"; pink represents the "baby boom echo".

Figure 3: 2007 Nebraska Population by Sex and Five-Year Age Group

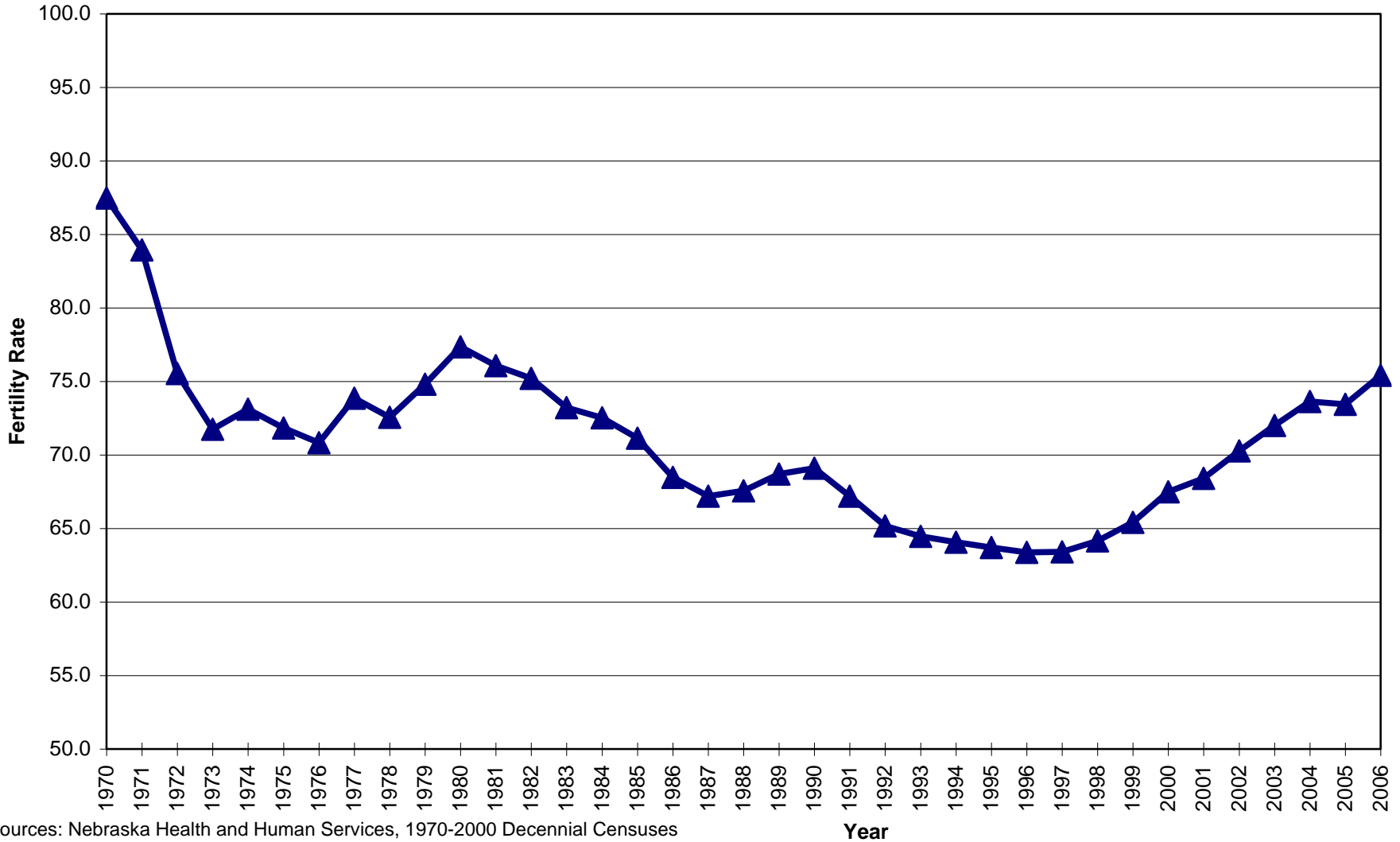


Source: Annual Estimates Program, U.S. Census Bureau, released 5-1-08

Green lines depict the depression cohort; red checker shows the "baby boom"; pink represents the "baby boom echo".

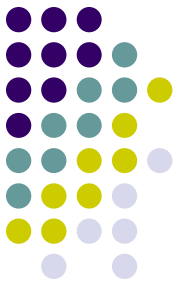
Rising Births & Declining Women Age 15-44 are pushing the fertility rate up

Figure 5: Nebraska Fertility Rate: 1970 - 2006
(Births per 1,000 Women Age 15-44)



Sources: Nebraska Health and Human Services, 1970-2000 Decennial Censuses and Annual Estimates Program (released 5-1-08), U.S. Census Bureau

Fertility rates are increasing among Nebraska's 3 major race/ethnic groups

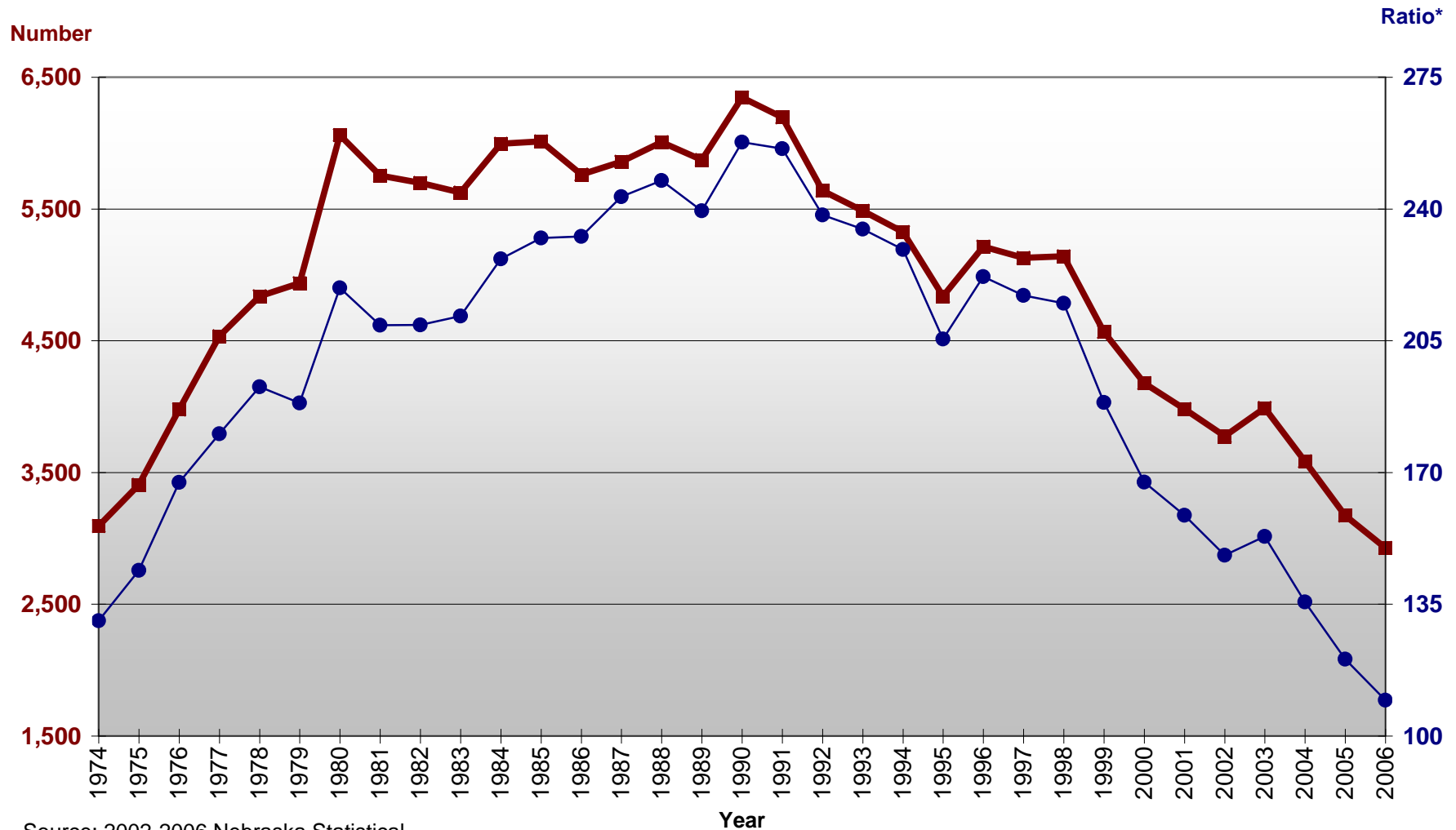


Year	Total	White non-Hispanic	Black non-Hispanic	Hispanic
1989	68.7	63.7	98.9	87.7
1990	69.1	64.1	97.2	93.7
1991	67.2	61.8	92.7	104.1
1992	65.2	59.4	90.4	111.5
1993	64.5	58.2	86.3	115.6
1994	64.1	57.4	85.5	113.2
1995	63.7	57.1	79.3	119.1
1996	63.4	56.5	75.8	124.5
1997	63.4	55.9	75.7	121.0
1998	64.1	56.3	74.1	122.9
1999	65.4	57.3	75.1	117.0
2000	67.5	59.4	83.0	120.9
2001	68.4	59.8	82.4	128.5
2002	70.3	60.6	85.3	137.3
2003	72.0	62.2	86.6	136.7
2004	73.6	63.7	91.6	133.1
2005*	73.4	66.1	90.8	143.9
2006*	75.4	67.3	101.9	145.2

* The birth reporting form changed in 2005 so the time series by race is not be directly comparable before/after this change.

One Factor in Recent Rising Births is Declining Induced Abortions

Figure 11: Number of Induced Abortions and Ratio of Abortions to Live Births: Nebraska 1974 to 2006



Source: 2002-2006 Nebraska Statistical Report of Abortions, Nebraska Health and Human Services System

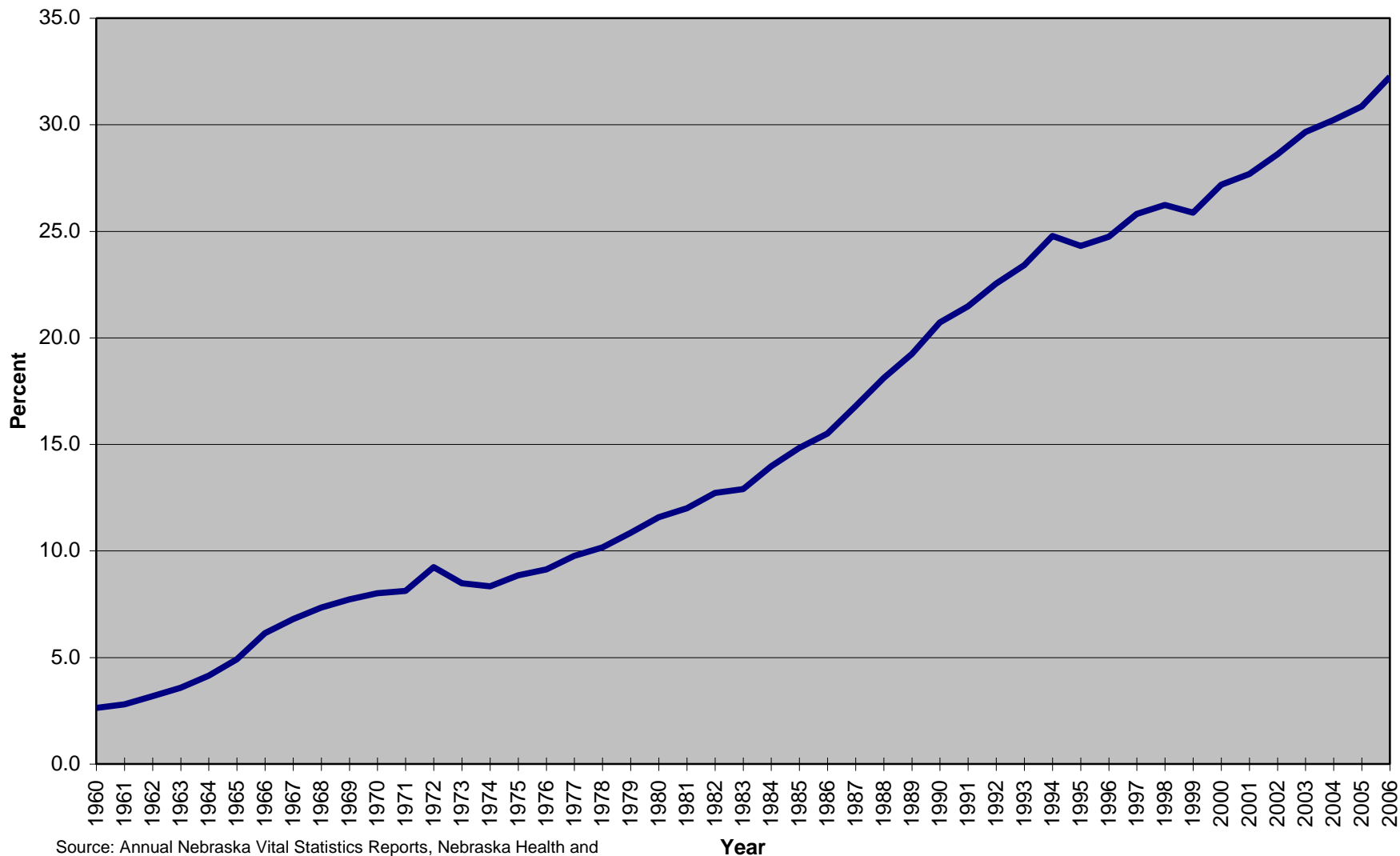
■ Number of Abortions
● Ratio*

* Ratio equals abortions per 1,000 live births

2006 Induced Abortions Occurring in the State were the fewest ever recorded

Births to Unmarried Women Have Risen Dramatically

Figure 10: Percentage of Births to Unmarried Mothers: Nebraska 1960 to 2006



Source: Annual Nebraska Vital Statistics Reports, Nebraska Health and Human Services System

Looking at Rates Provides Additional Information



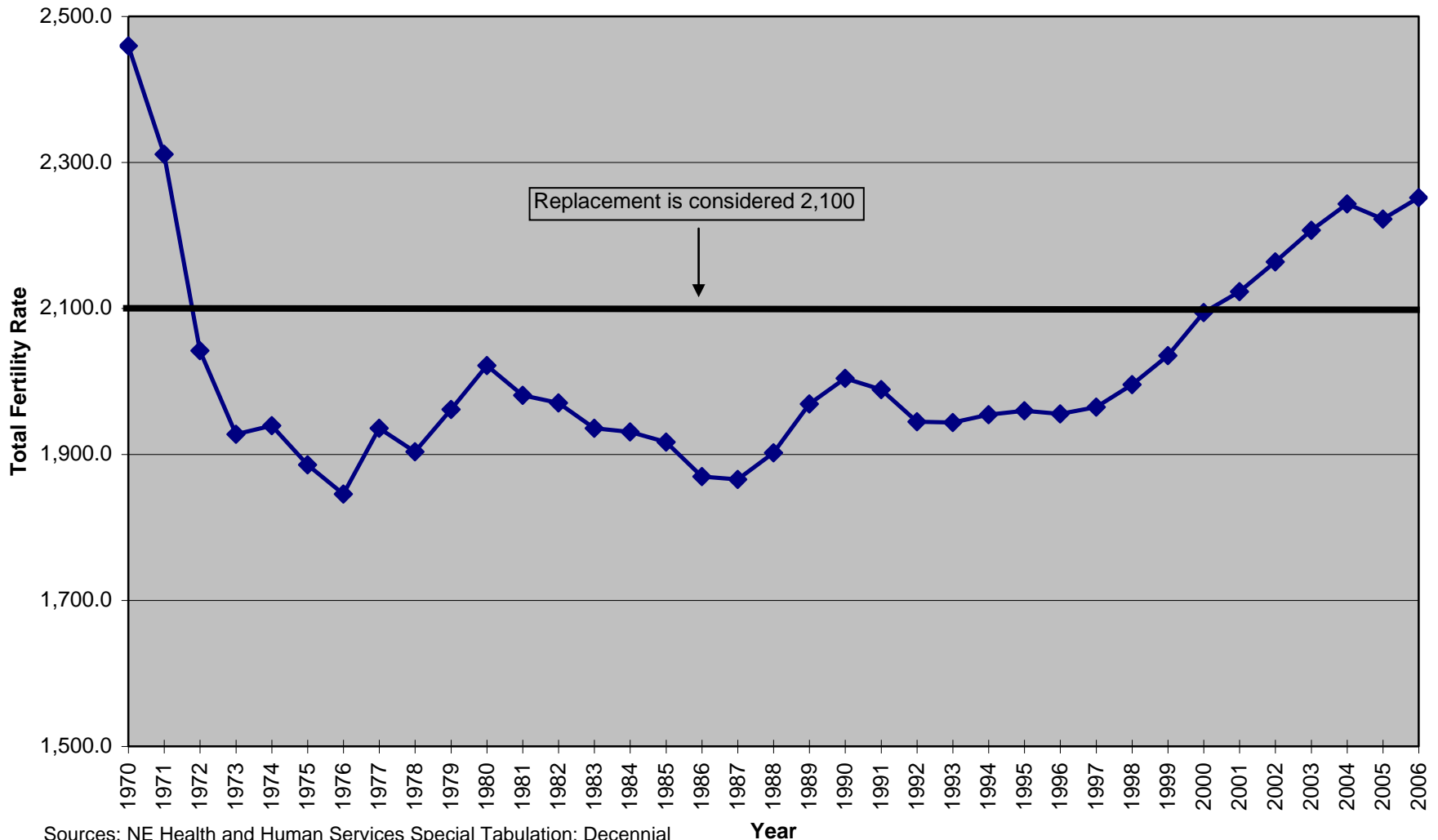
Table 5: Births and Fertility Rates for Unmarried and Married Nebraska Women: 1960 to 2006

Year	Births to Unmarried Mothers	Age 15-44 Unmarried Women	Rate per 1,000	Percentage Change per year	Births to Married Mothers	Age 15-44 Married Women	Rate per 1,000	Percentage Change per year
1960	900	70,396	12.8	n/a	33,357	192,491	173.3	n/a
1970	2,072	106,139	19.5	5.3	23,805	189,400	125.7	-2.7
1980	3,165	145,459	21.8	1.1	24,170	208,777	115.8	-0.8
1990	5,048	135,337	37.3	7.1	19,314	194,486	99.3	-1.4
2000	6,697	172,681	38.8	0.4	17,946	192,960	93.0	-0.6
2006	8,617	186,038	46.3	3.2	18,105	170,524	106.2	1.4

1. Rates for unmarried increased each period while married decreased in all except 2000 – 2006
2. Married rate was 13.5 times higher than unmarried in 1960; 2.4 times higher currently in 2006
3. People are marrying later in life, affecting the numbers somewhat; baby boomers moving beyond age 44 impacts the numbers

Nebraska Population “Replacing” Itself

Figure 6d: Total Fertility Rate: Nebraska 1970 to 2006
(Total Births per 1,000 Women Over their Lifetime)



Sources: NE Health and Human Services Special Tabulation; Decennial Censuses and Estimates Program (Rel. 5-1-08), U.S. Census Bureau

In 2006, the U.S. was at 2,101 -- right at the replacement level

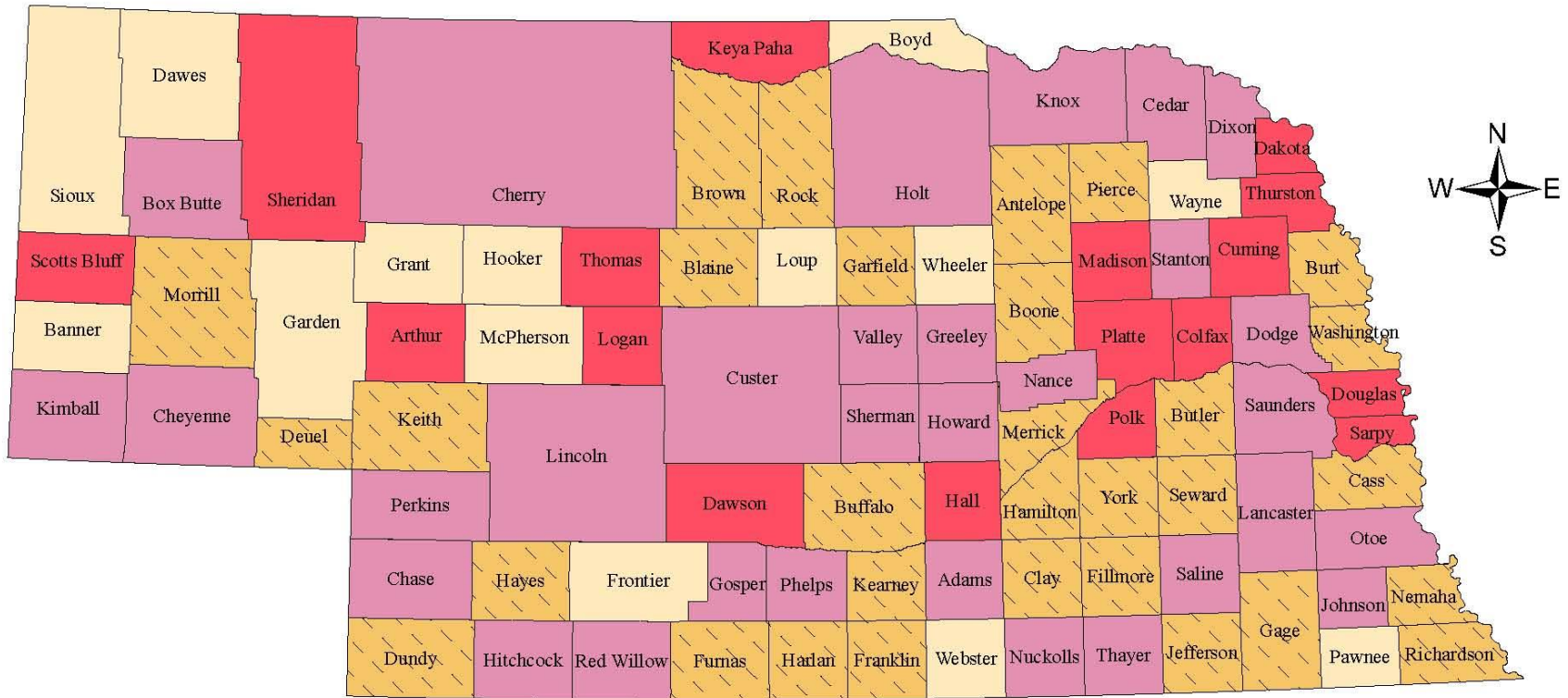
2 major points from the Nebraska Births Report



- Given Nebraska's sex and age structure (pyramid), in the next several years the baby boom echo will move into their prime child-bearing years (25-34), so births and fertility rates are projected to continue increasing.
- Since most Nebraska counties have been experiencing net outmigration, those also having natural loss are destined to have population loss in the short term or until trends change.

Map 2: County Fertility Rates (Births per 1,000 Women Age 15-44): 2002 to 2006

(Based on Average Yearly Births and Average Female Population Age 15-44 from 2002 to 2006)



Births per 1,000 Women Age 15-44

Nebraska Fertility Rate = 72.8



