

MONTANA'S POPULATION LOOKING FORWARD

1

PRESENTATION AT:
CEIC DATA USER'S CONFERENCE
NOVEMBER 2013

JOE RAMLER,
SENIOR ECONOMIST
CENSUS & ECONOMIC INFORMATION CENTER (CEIC)
MONTANA DEPARTMENT OF COMMERCE
WWW.CEIC.MT.GOV | 406.841.2740



WHAT ARE WE TALKING ABOUT TODAY...

2



- **DATA SOURCES & OVERVIEW**
- **MONTANA HISTORIC & PROJECTED POPULATION**
 - TOTAL POPULATION AND GROWTH LOOKING FORWARD
- **COMPONENTS OF POPULATION CHANGE**
 - NATURAL INCREASE/DECREASE & REPLACEMENT RATES OVER TIME
 - NET MIGRATION BY COMPONENT
- **DEMOGRAPHIC CHARACTERISTIC SHIFT IN MONTANA'S POPULATION**
 - % CHANGE IN POPULATION BY AGE OVER TIME
 - MEDIAN & AVERAGE AGE
- **DEPENDENCY RATIO**
 - COMPONENTS OF A DEPENDENCY RATIO AND WHAT IT INFERS
- **WHY SHOULD WE CARE ABOUT SHIFTING DEMOGRAPHIC CHARACTERISTICS IN MT**
- **WHAT DOES AN AGING POPULATION MEAN FOR MONTANA**

DATA SOURCE & INFORMATION

3

THE POPULATION DATA USED IN THIS PRESENTATION IS FROM **eREMI** – A PRODUCT OF REGIONAL ECONOMIC MODELS, INC. (REMI)

- FIGURES FOR 1990 – 2010 ARE HISTORIC *ESTIMATES*
- FIGURES FOR 2011 – 2060 ARE PROJECTED ESTIMATES

NOTE – THE HISTORIC POPULATION NUMBERS PRESENTED HERE ARE **NOT** OFFICIAL CENSUS FIGURES...

THEY ARE MODEL ESTIMATES BASED ON HISTORIC DATA USED TO CREATE A MODEL FOR PROJECTING FUTURE FIGURES

THESE HISTORIC FIGURES TRACK HISTORIC CENSUS POPULATION TRENDS AND PROVIDE A CONSISTENT TIME SERIES OF DEMOGRAPHIC CHARACTERISTICS MOVING FORWARD INTO THE FUTURE

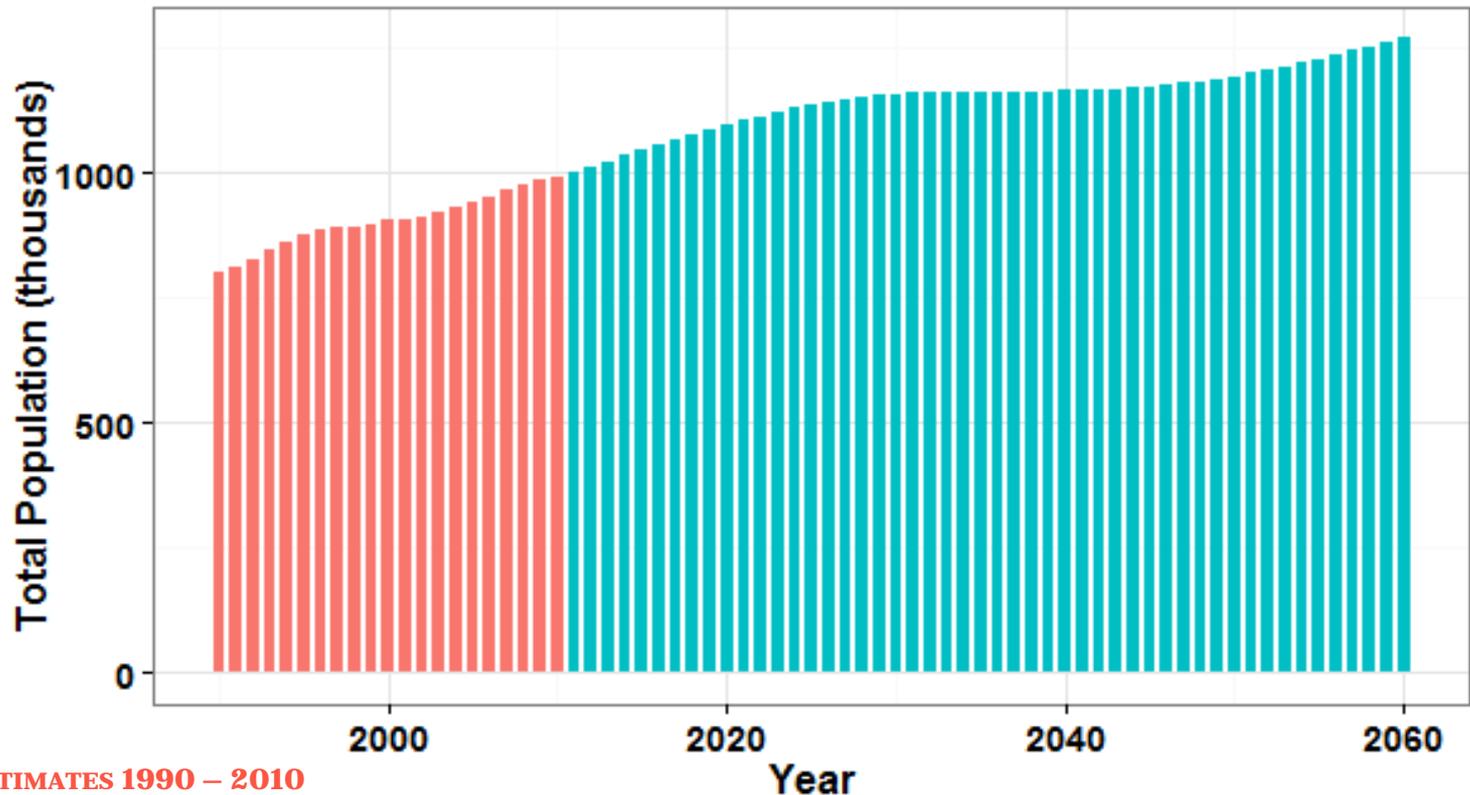


MONTANA TOTAL POPULATION

4

Montana Historic & Projected Total Population

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

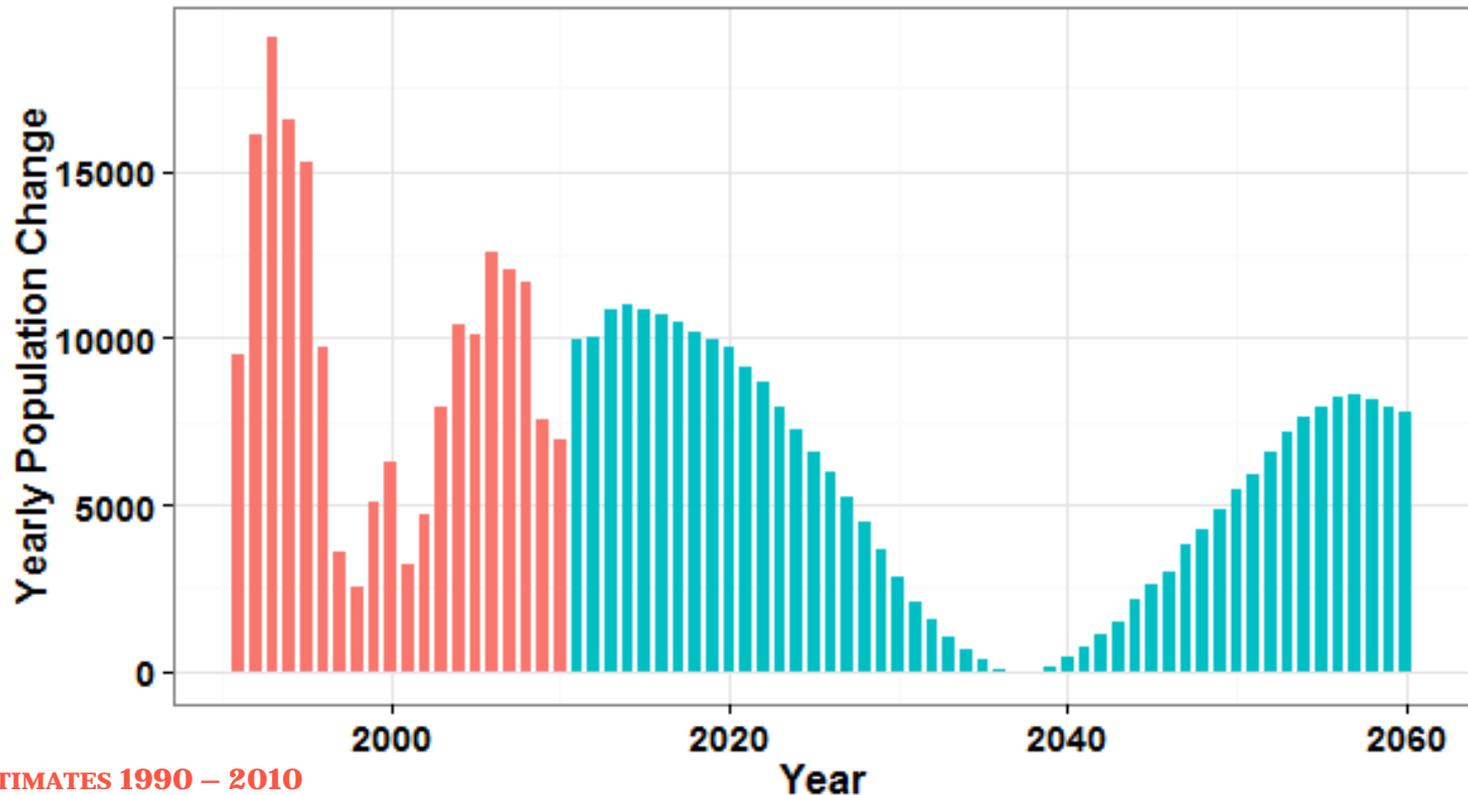
PROJECTED FIGURES 2011 - 2060

YEARLY POPULATION CHANGE

5

Montana Historic & Projected Yearly Population Change

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

COMPONENTS OF POPULATION CHANGE

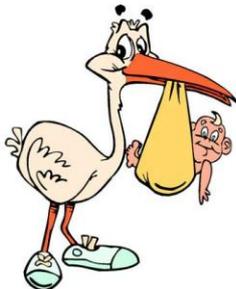
6

ESSENTIALLY POPULATION CHANGE IS A PRODUCT OF 3 THINGS:

1. TOTAL NUMBER OF NEW BIRTHS - POSITIVE IMPACT 
2. TOTAL NUMBER OF DEATHS - NEGATIVE IMPACT 

$$(BIRTHS - DEATHS) = NATURAL CHANGE$$

3. NET MIGRATION IN/OUT - ???????

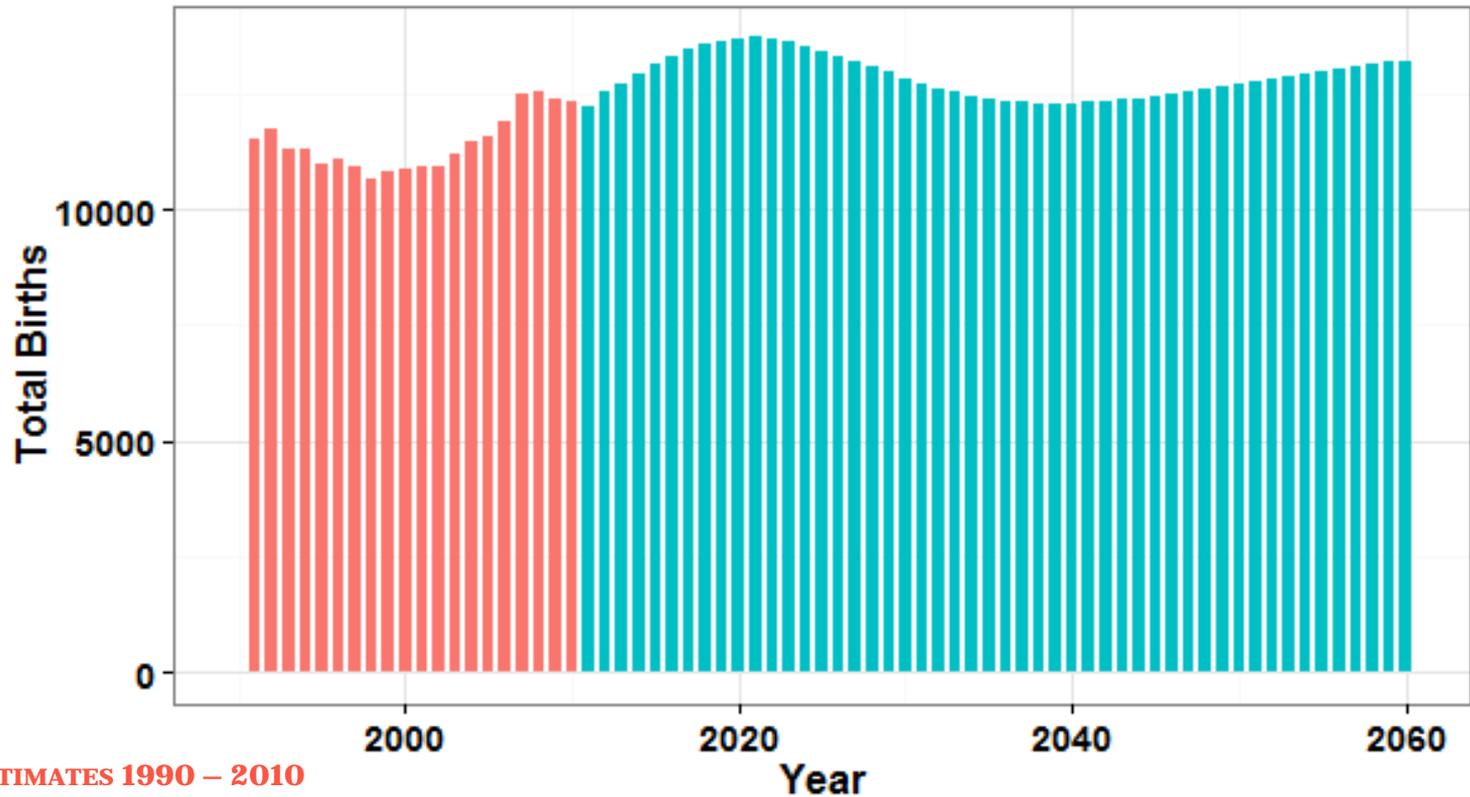
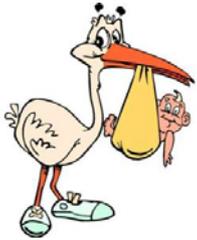


NATURAL CHANGE - BIRTHS

7

Montana Historic & Projected Total Births

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

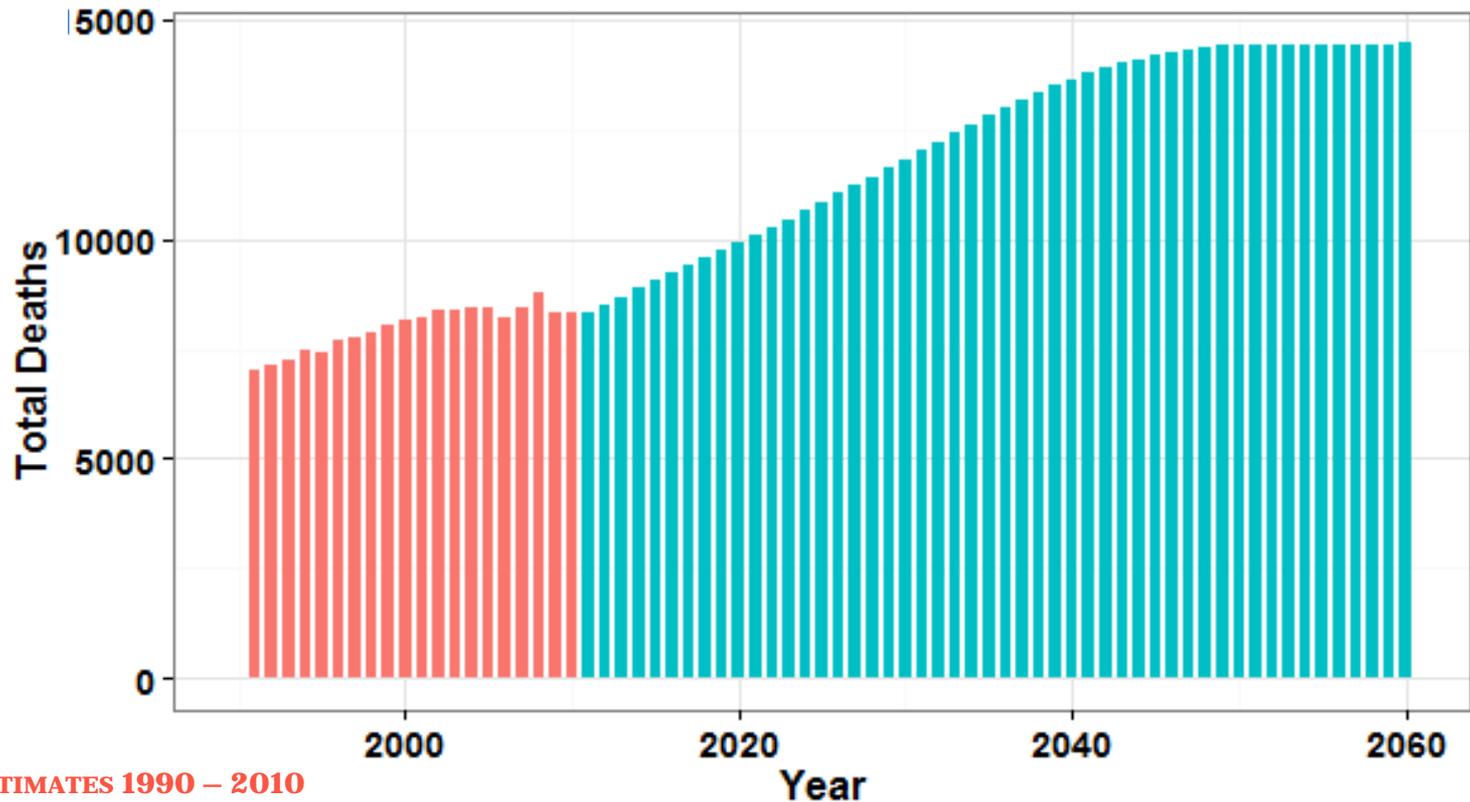
NATURAL CHANGE - DEATHS

8



Montana Historic & Projected Total Deaths

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

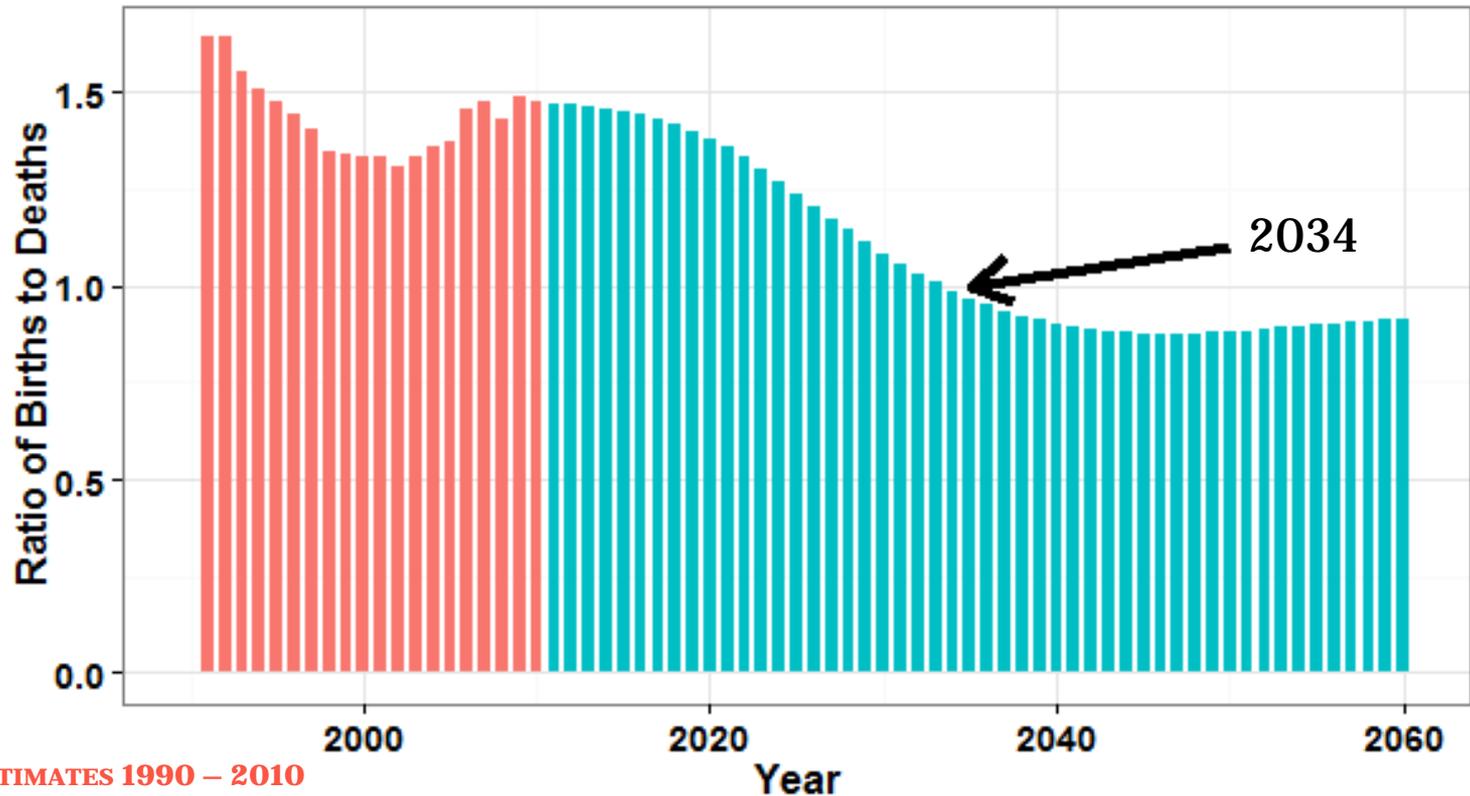
RATIO OF BIRTHS TO DEATHS

“REPLACEMENT RATE”

9

Montana Historic & Projected Ratio of Births to Deaths

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

TOTAL NET MIGRATION

10

TOTAL NET MIGRATION IS THE SUM/DIFFERENCE BETWEEN PEOPLE MOVING INTO AND OUT OF AN AREA.

ECONOMIC MIGRANTS

PEOPLE MOVING INTO/OUT OF AN AREA FOR ECONOMIC OPPORTUNITY – GENERALLY THOUGHT OF IN TERMS OF FINDING WORK AND/OR BETTER PAY

RETIRED MIGRANTS

PEOPLE MOVING INTO/OUT OF AN AREA FOR RETIREMENT – TO GET CLOSER TO CHILDREN, THEY ENJOY THE AREA FOR ITS AMENITIES, OR MOVING OUT BECAUSE THEY ONLY LIVED THERE BECAUSE OF THEIR JOB

INTERNATIONAL MIGRANTS

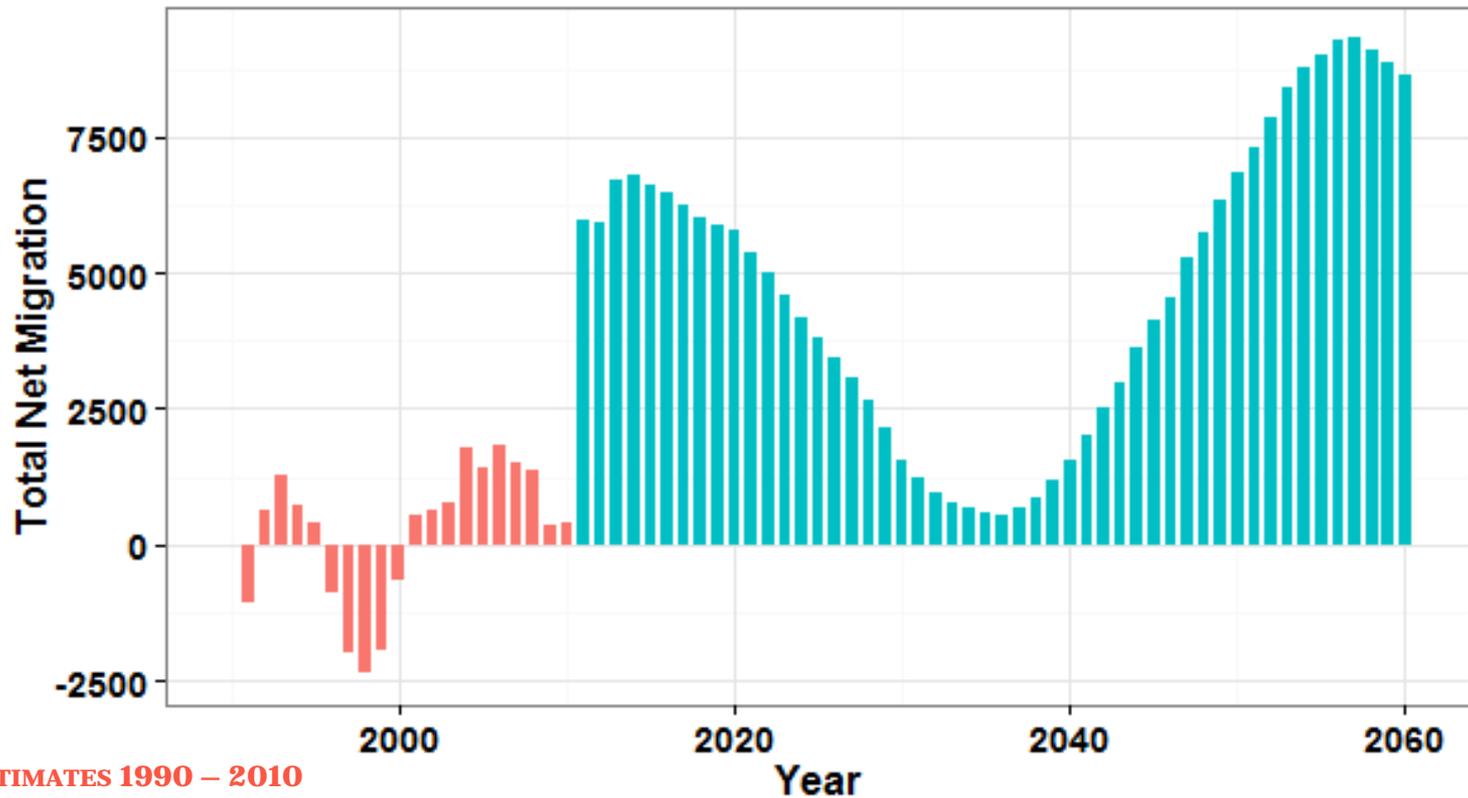
PEOPLE MOVING INTO AN AREA FROM ANOTHER COUNTRY

TOTAL NET MIGRATION

11

Montana Historic & Projected Total Net Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

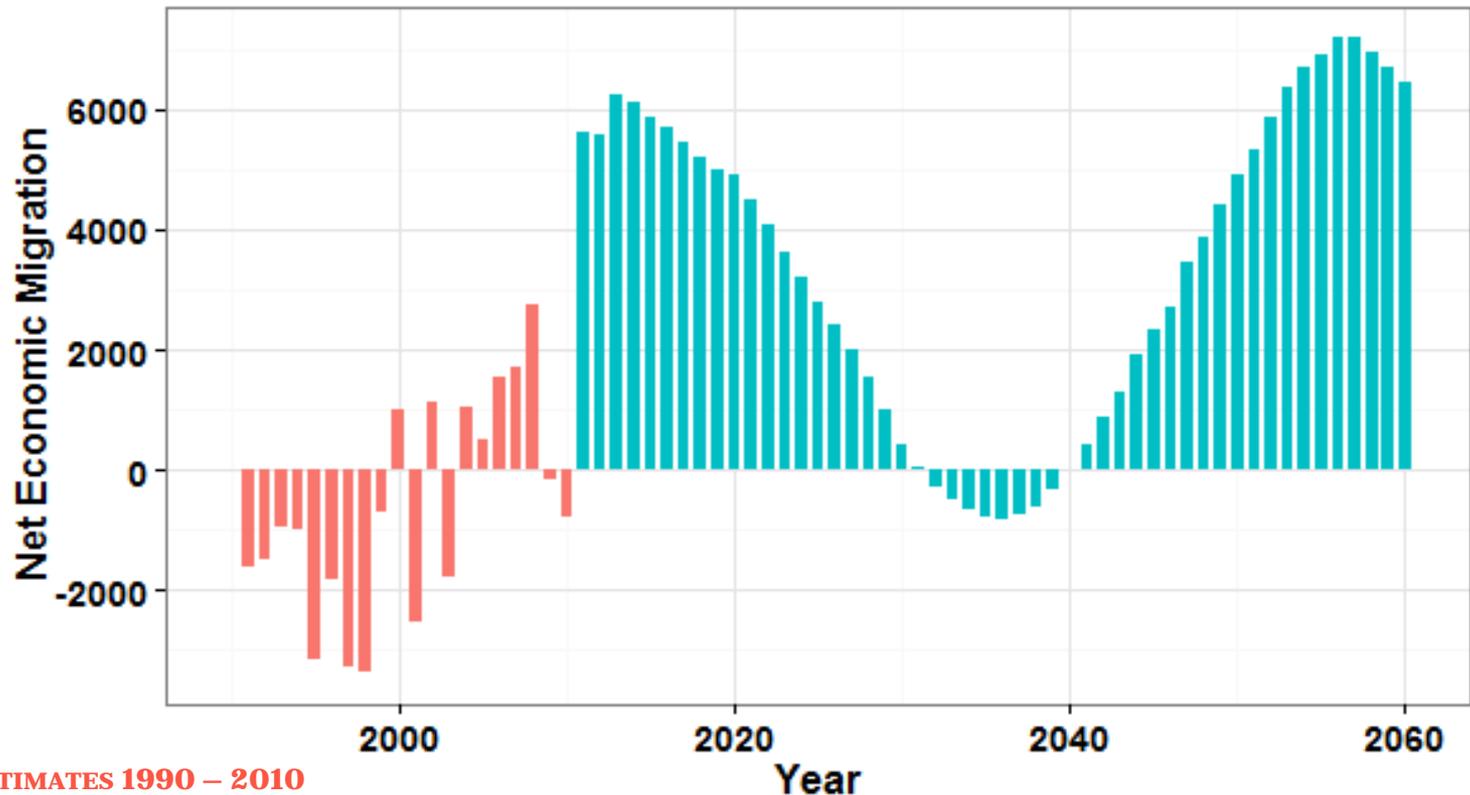
PROJECTED FIGURES 2011 - 2060

NET ECONOMIC MIGRATION

12

Montana Historic & Projected Net Economic Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

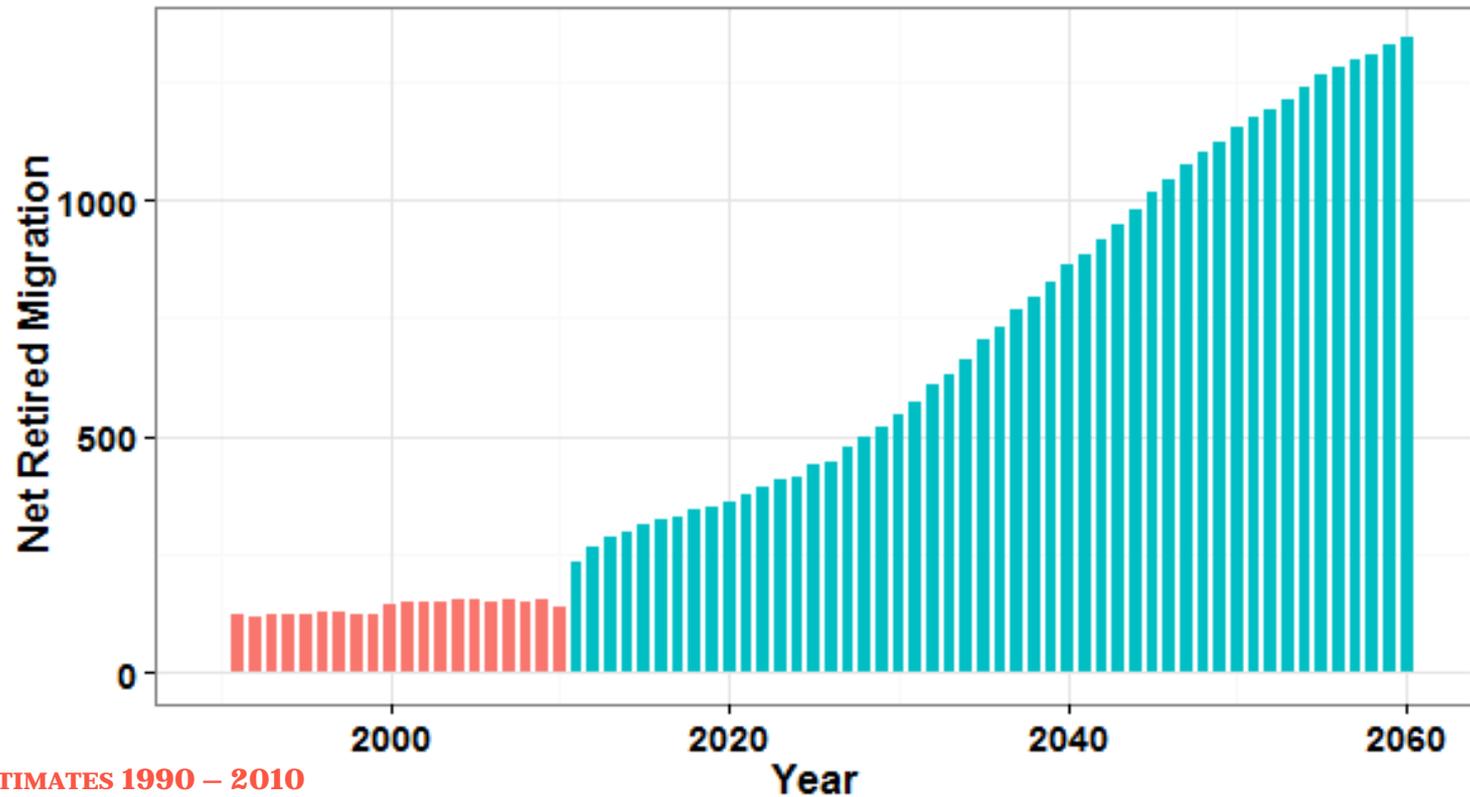
PROJECTED FIGURES 2011 - 2060

NET RETIRED MIGRATION

13

Montana Historic & Projected Net Retired Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

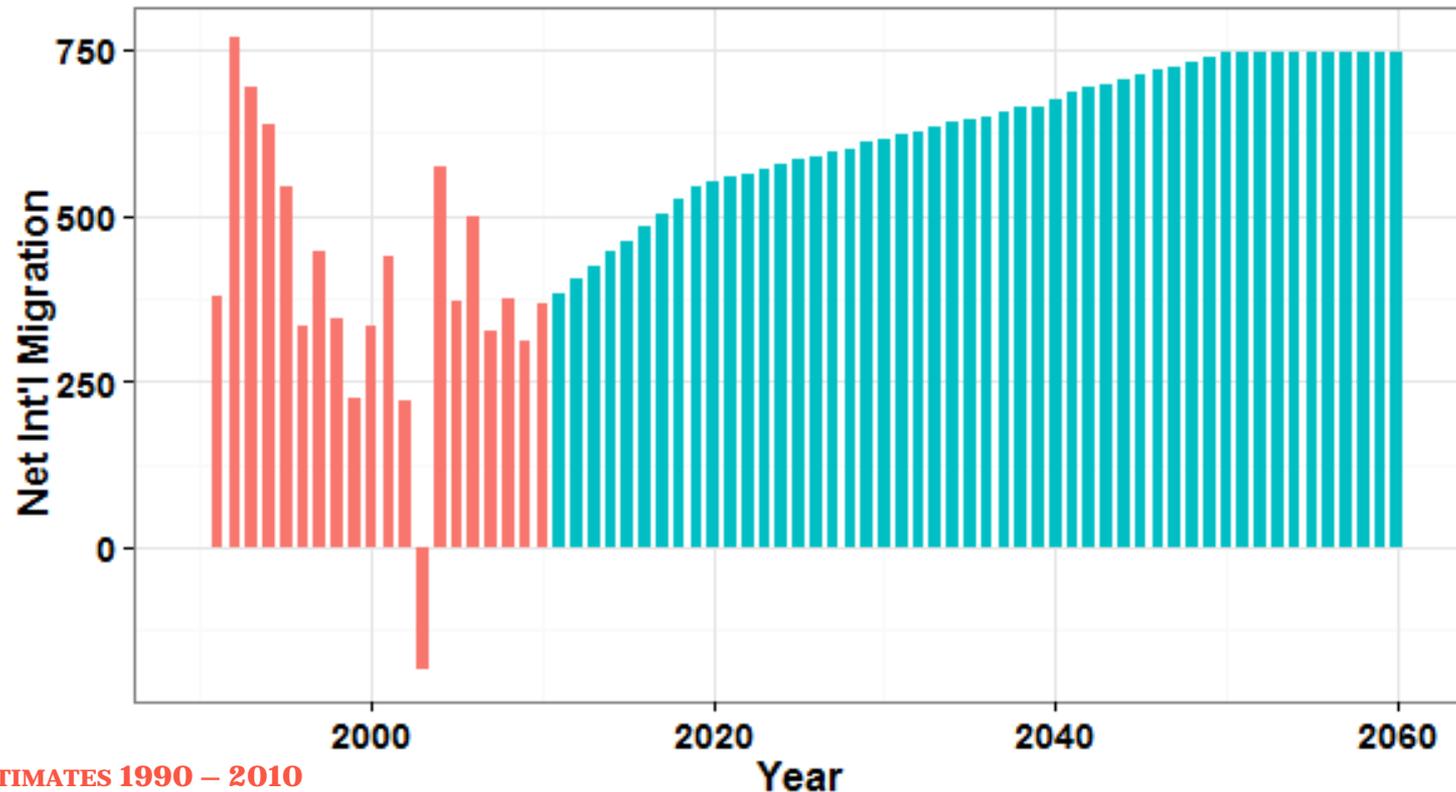
PROJECTED FIGURES 2011 - 2060

NET INTERNATIONAL MIGRATION

14

Montana Historic & Projected Net International Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

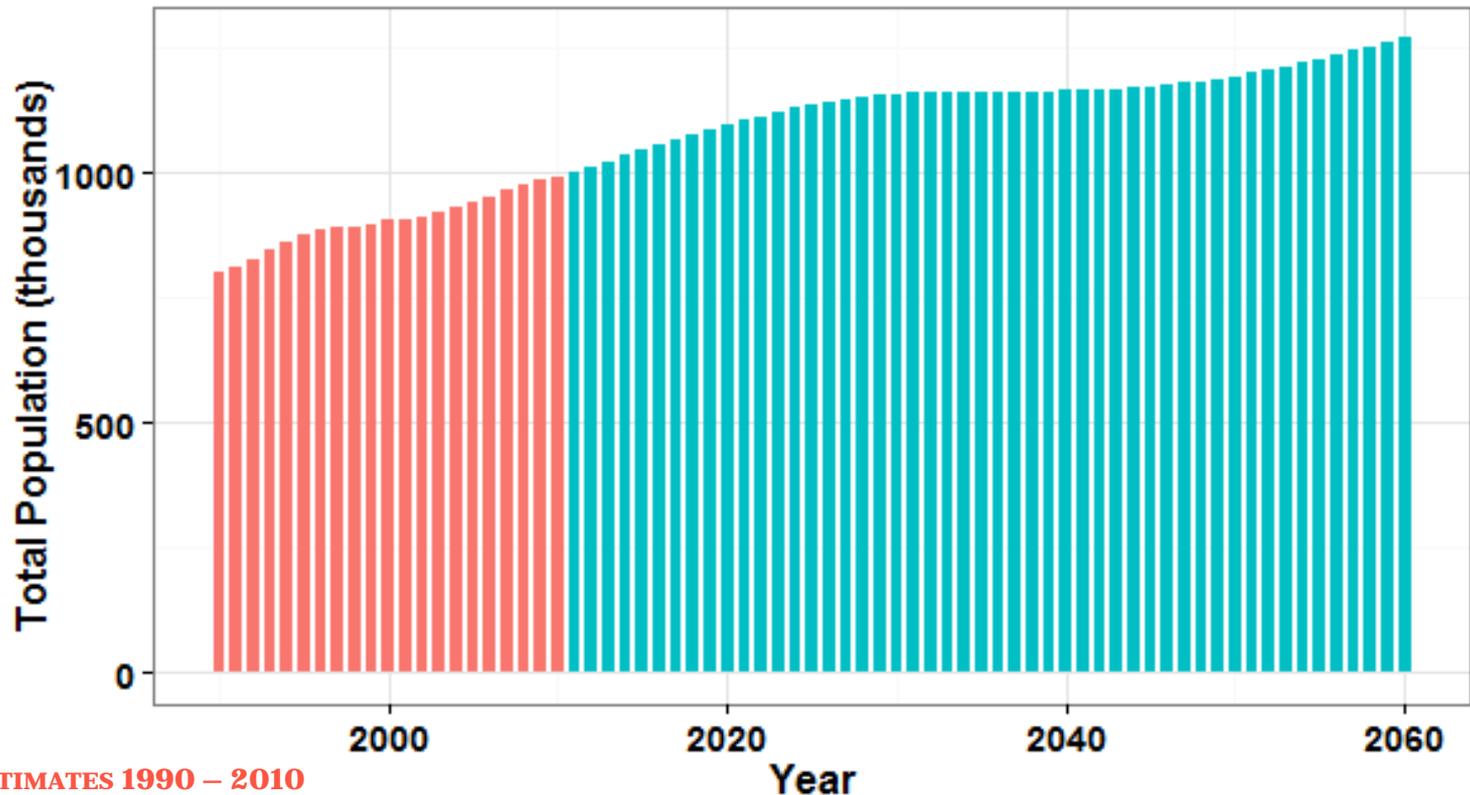
PROJECTED FIGURES 2011 - 2060

MONTANA TOTAL POPULATION... AGAIN

15

Montana Historic & Projected Total Population

Source: eREMI - Released April 2013



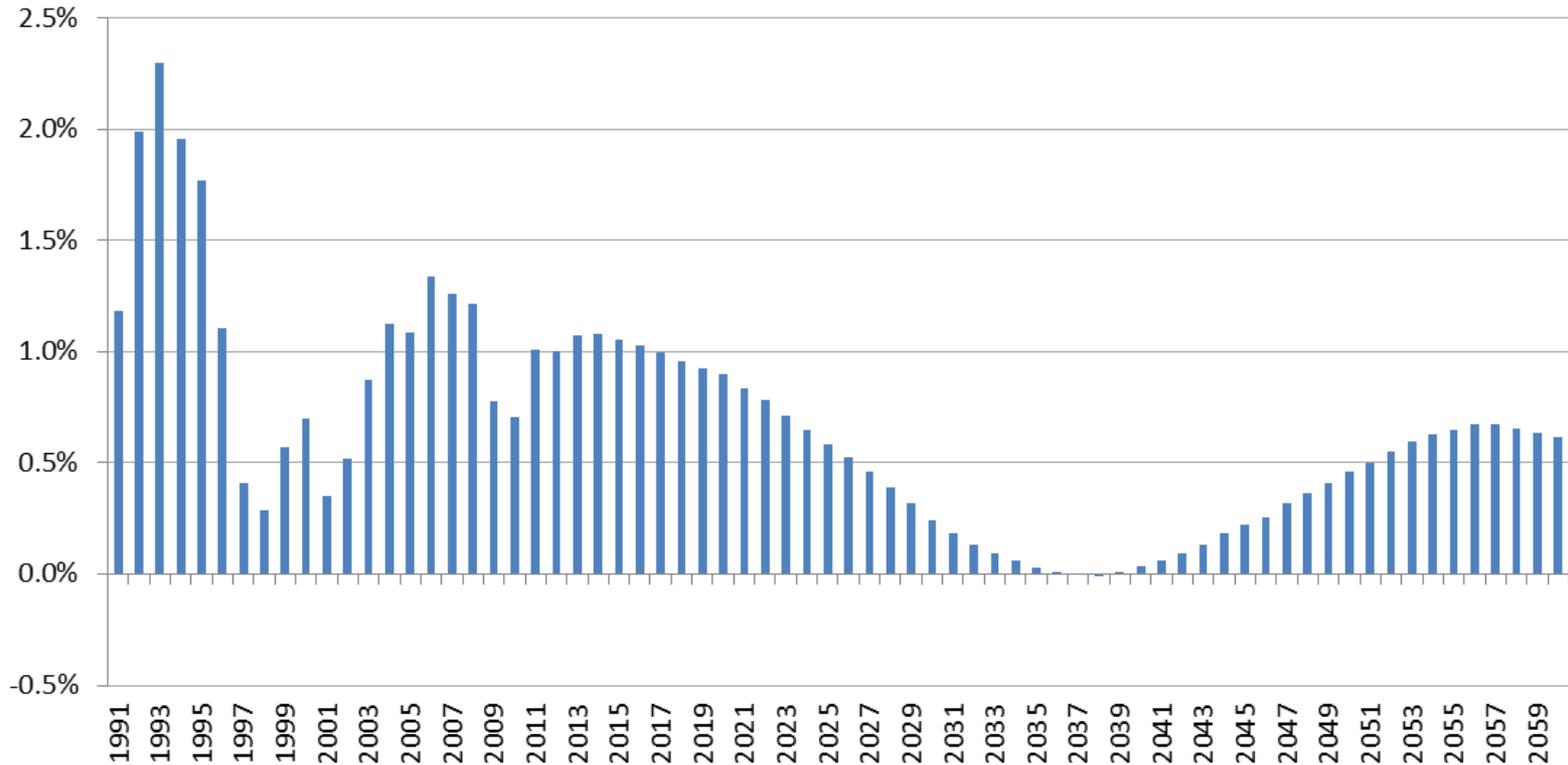
HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

MONTANA POPULATION CHANGE

MONTANA POPULATION YEAR OVER YEAR % CHANGE

HISTORIC & PROJECTED FIGURES, 1990 - 2060



Source: eREMI - A product of Regional Economic Models, Inc. - Released April 2013

WHAT HAVE WE CONCLUDED SO FAR...

17

MONTANA'S OVERALL POPULATION IS PROJECTED TO CONTINUE TO GROW FOR THE NEXT 20 OR SO YEARS - THOUGH AT A DECREASING RATE



WHY...

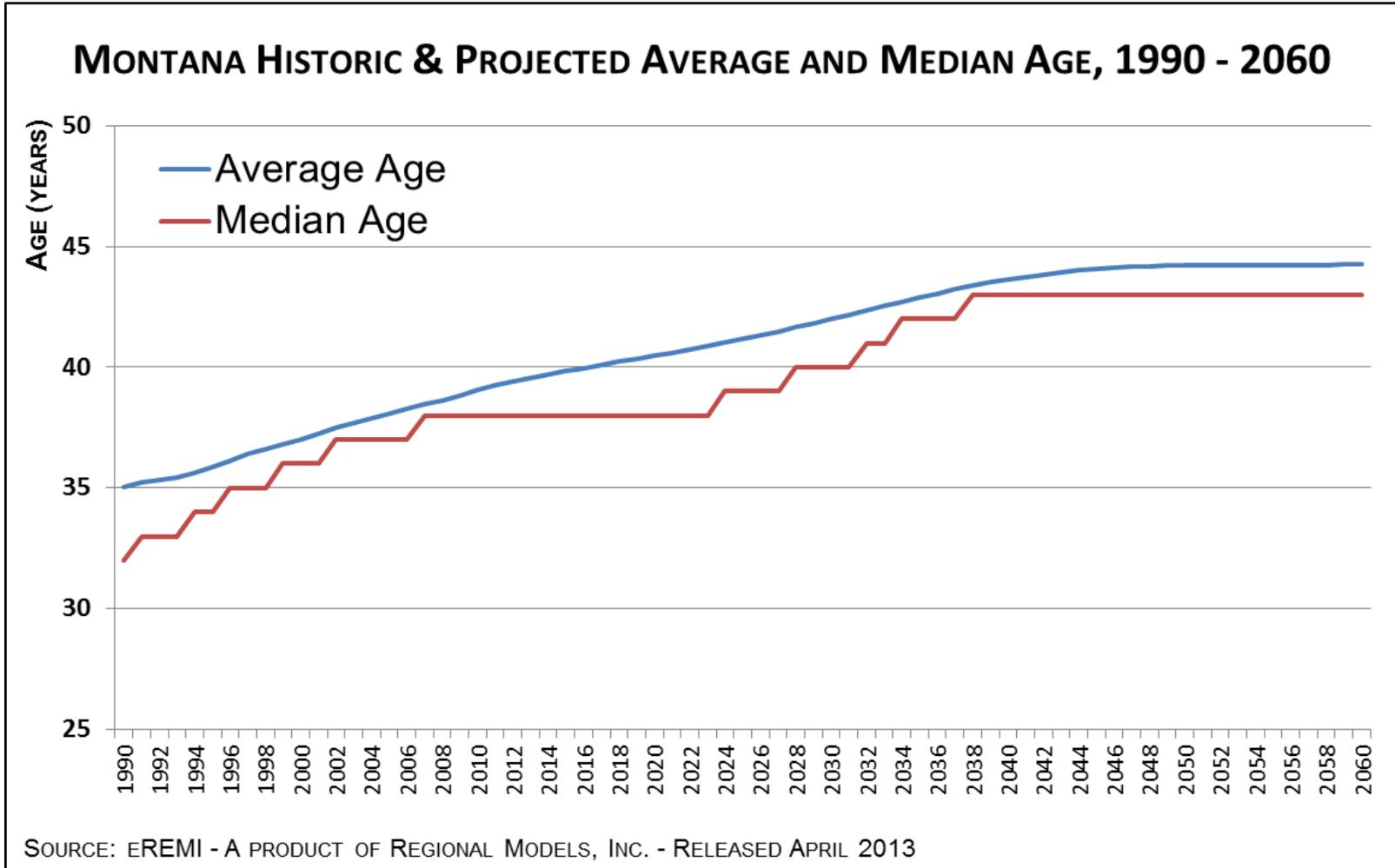
- **A REPLACEMENT RATE (BIRTH TO DEATH RATIO) THAT CONTINUES TO DECLINE ULTIMATELY BELOW 1 SOMETIME AFTER 2030**
 - **BIRTH RATES ARE GOING DOWN AS DEATH RATES RISE**
- **TOTAL NET MIGRATION INTO THE STATE SLOWLY DECLINING DUE PRIMARILY TO A PROJECTED REDUCED ECONOMIC IN-MIGRATION**
 - **THIS IS PRIMARILY A PRODUCT OF EXPECTED BUSINESS CYCLES...**

HOWEVER, RETIRED MIGRATION IS EXPECTED TO GROW INTO THE FUTURE....

ALL OF THIS TOGETHER RESULTS IN AN OVERALL SHIFT IN THE AGE DISTRIBUTION OF MONTANA'S POPULATION

AVERAGE & MEDIAN AGE

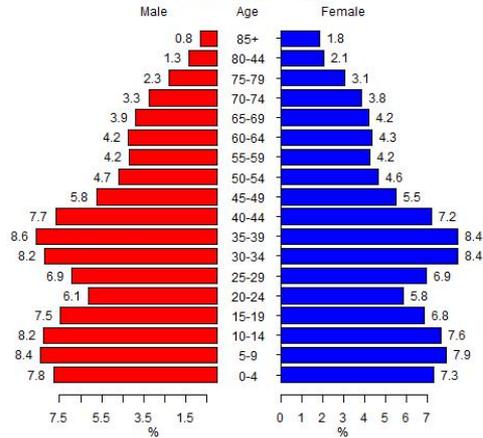
18



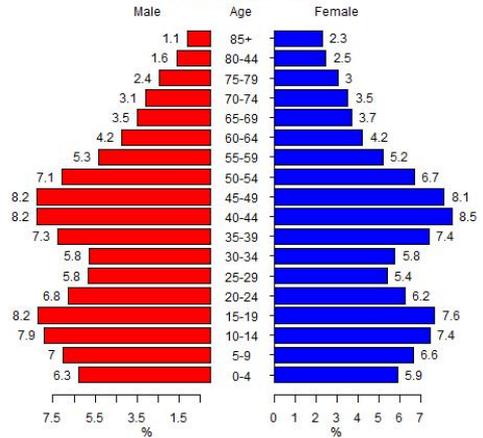
MT POPULATION AGE DISTRIBUTION

19

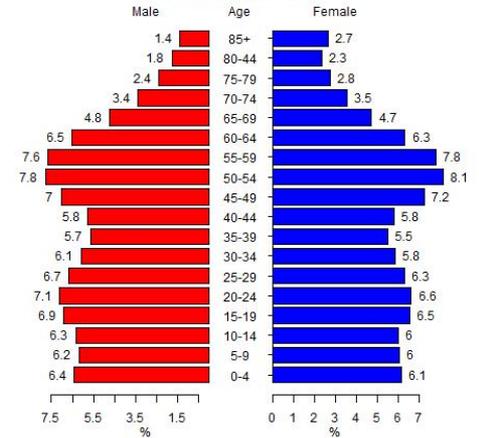
Montana Total - 1990



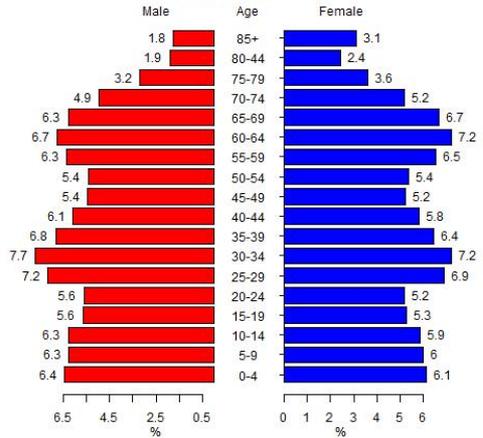
Montana Total - 2000



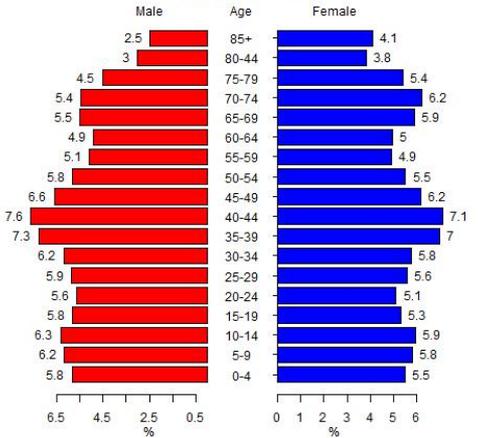
Montana Total - 2010



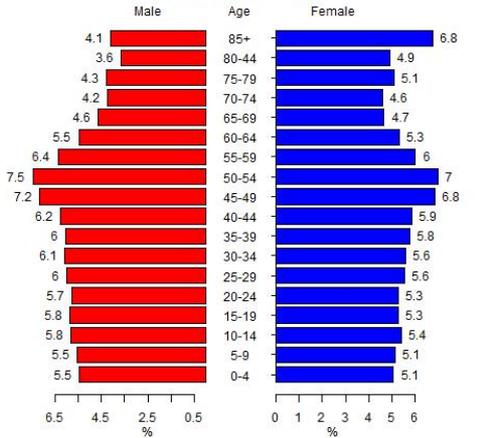
Montana Total - 2020



Montana Total - 2030



Montana Total - 2040

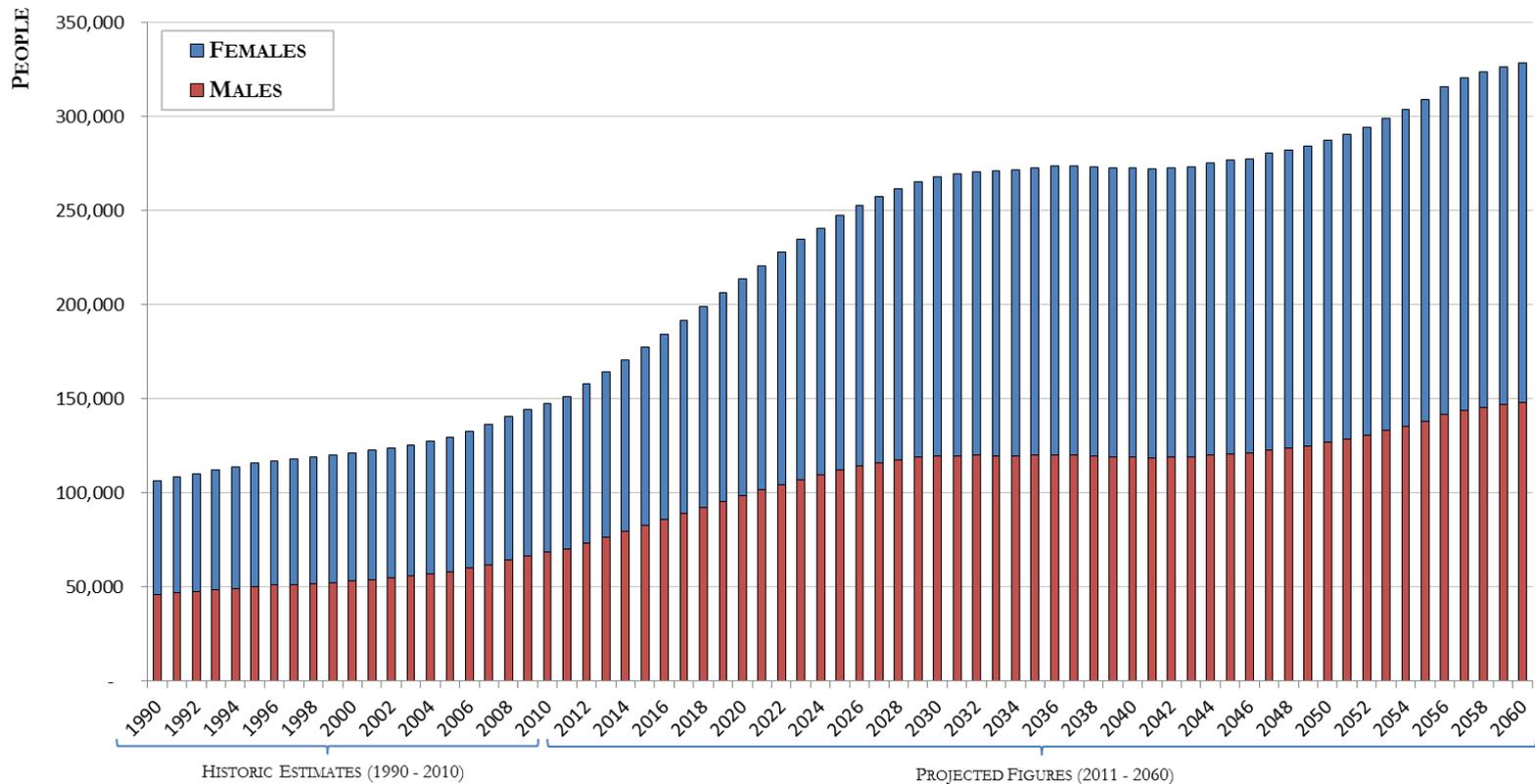


Montana Population Age 65+

20

MONTANA PROJECTED POPULATION 65 YEARS AND OVER, 1990 - 2060

HISTORIC ESTIMATES FOR 1990 - 2010; PROJECTED FIGURES FOR 2011 - 2060
 SOURCE: EREMI - A PRODUCT OF REGIONAL ECONOMIC MODELS, INC. - RELEASED APRIL 2013



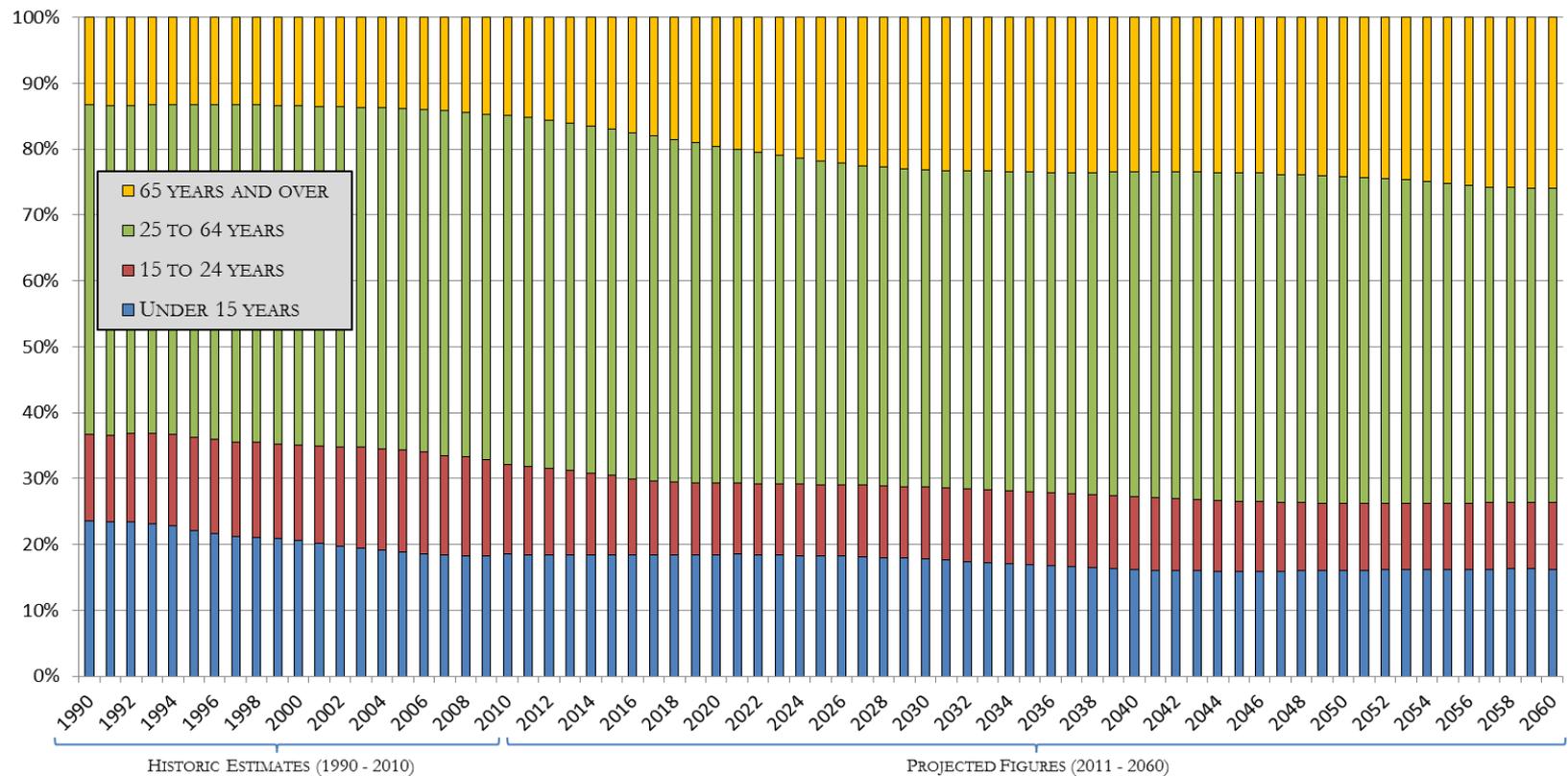
COMPILED BY THE CENSUS & ECONOMIC INFORMATION CENTER, MT DEPARTMENT OF COMMERCE (WWW.CEIC.MT.GOV)

Montana Population by Age Groups

MONTANA PROJECTED POPULATION - PERCENT AGE GROUP OF THE TOTAL POPULATION, 1990 - 2060

HISTORIC ESTIMATES FOR 1990 - 2010; PROJECTED FIGURES FOR 2011 - 2060

SOURCE: EREMI - A PRODUCT OF REGIONAL ECONOMIC MODELS, INC. - RELEASED APRIL 2013

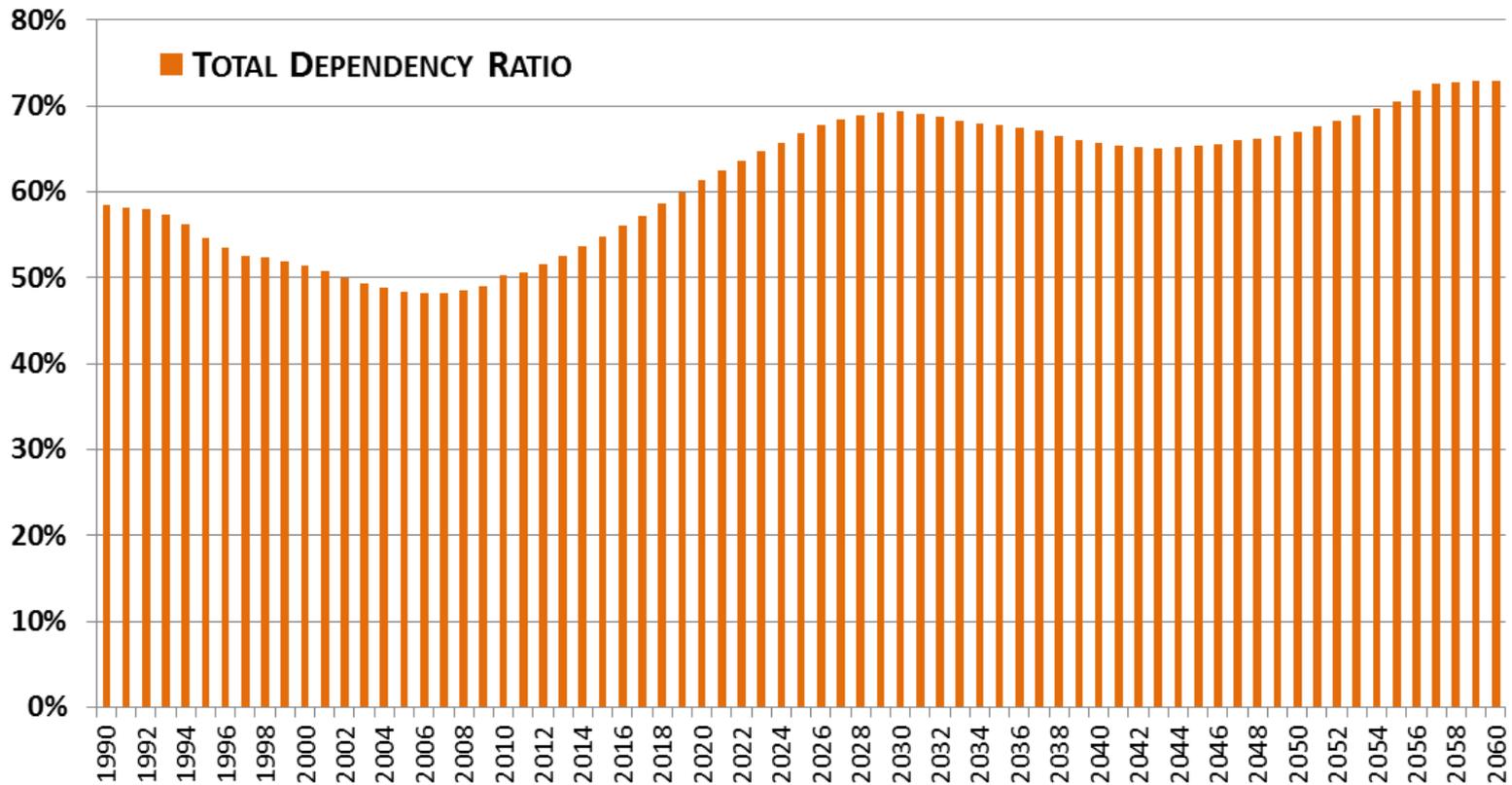


COMPILED BY THE CENSUS & ECONOMIC INFORMATION CENTER, MT DEPARTMENT OF COMMERCE (WWW.CEIC.MT.GOV)

DEPENDENCY RATIO

22

MONTANA TOTAL DEPENDENCY RATIO HISTORIC & PROJECTED, 1990 - 2060



SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

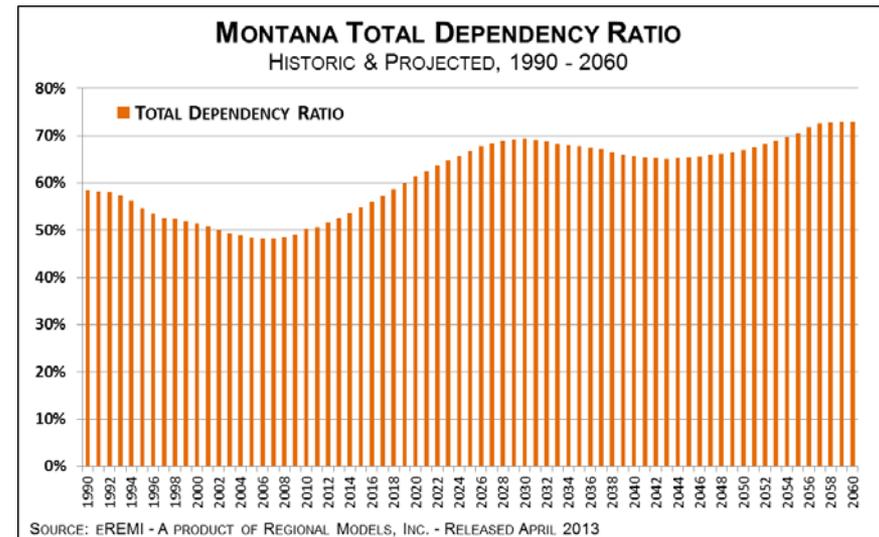
WHAT IS A DEPENDENCY RATIO???

23

DEPENDENCY RATIO - AN AGE-POPULATION RATIO OF THOSE TYPICALLY NOT IN THE LABOR FORCE (THE *DEPENDENT* PART) AND THOSE TYPICALLY IN THE LABOR FORCE (THE *PRODUCTIVE* PART)

$$\frac{(\text{number of people aged } 0 - 14) + (\text{number of people aged } 65 \text{ and older})}{(\text{number of people aged } 15 - 64)} * 100$$

- A MEASURE OF THE PRESSURE ON THE “PRODUCTIVE” POPULATION IN AN AREA



WHAT IS A DEPENDENCY RATIO???

24

THE **TOTAL DEPENDENCY RATIO** IS MADE UP OF TWO *DEPENDENT* GROUPS:

YOUNGER PEOPLE - AGES 0 – 14 YEARS OLD



$$\text{Child Dependency Ratio} = \frac{(\text{number of people aged } 0 - 14)}{(\text{number of people aged } 15 - 64)} * 100$$

OLDER PEOPLE - AGE 65 YEARS AND OLDER



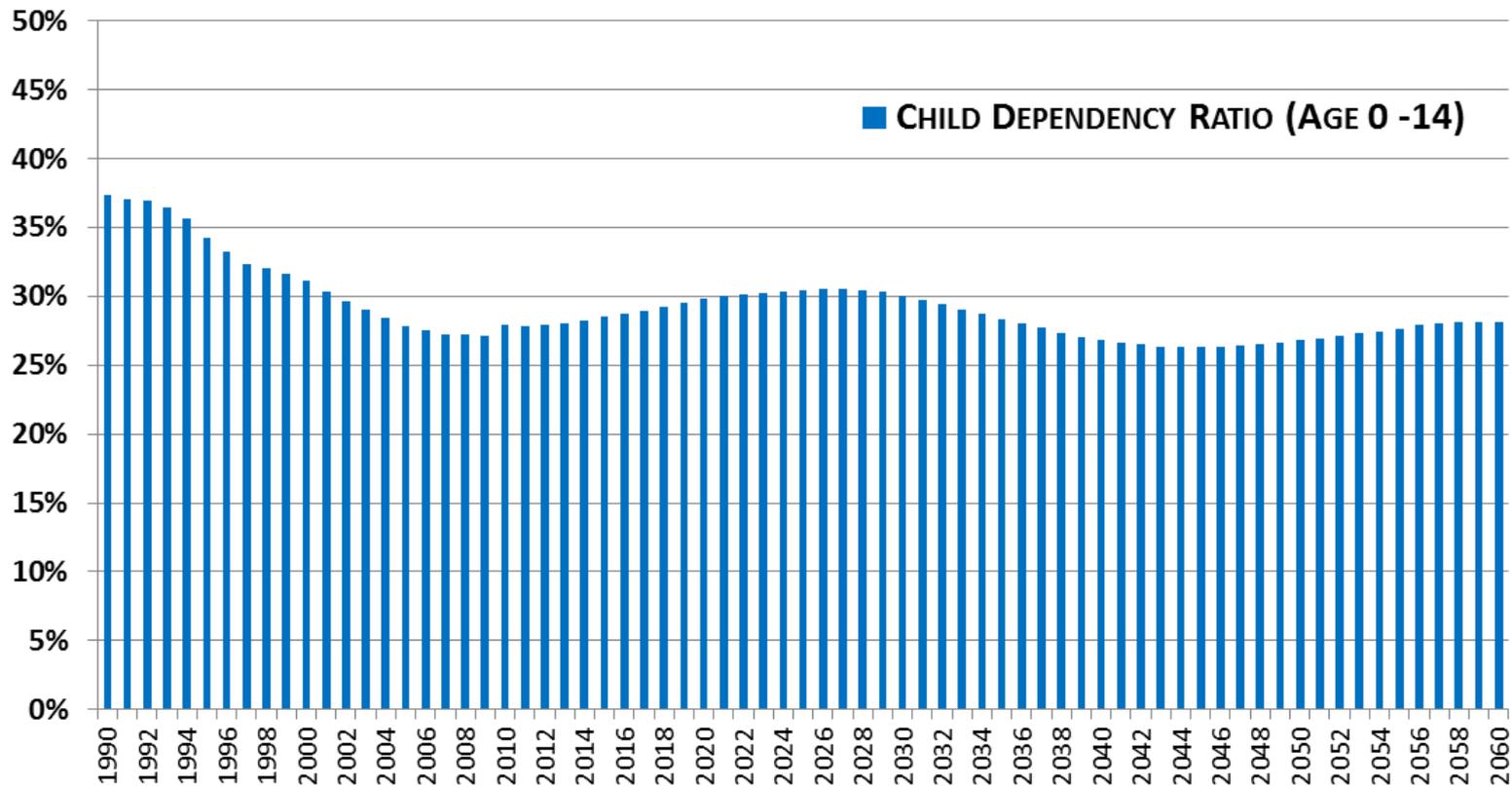
$$\text{Aged Dependency Ratio} = \frac{(\text{number of people aged } 65 \text{ years and over})}{(\text{number of people aged } 15 - 64)} * 100$$

DEPENDENCY RATIO - CHILD

25

MONTANA CHILD DEPENDENCY RATIO

HISTORIC & PROJECTED , 1990 - 2060



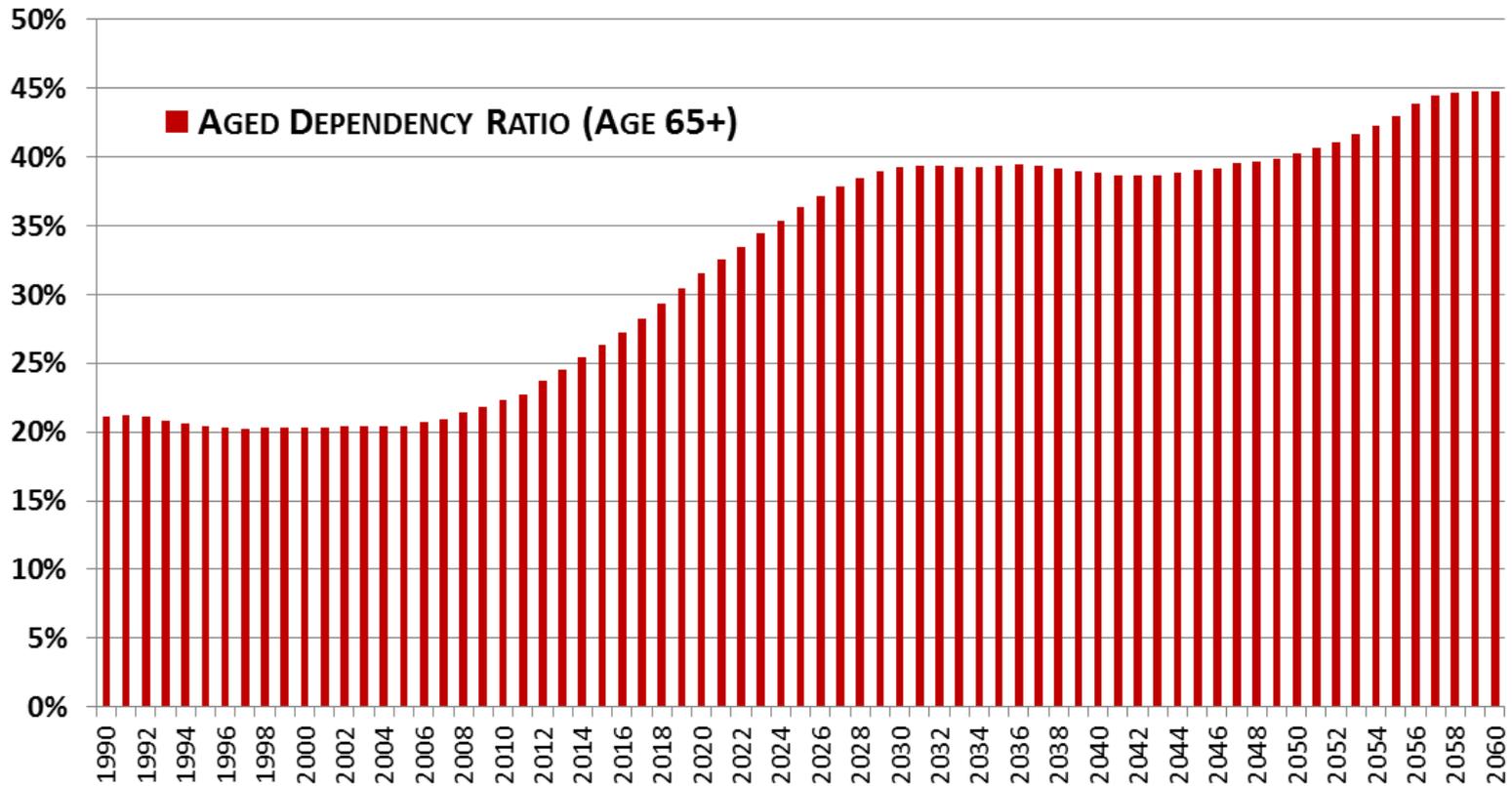
SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

DEPENDENCY RATIO - AGED

26

MONTANA AGED DEPENDENCY RATIO

HISTORIC & PROJECTED , 1990 - 2060



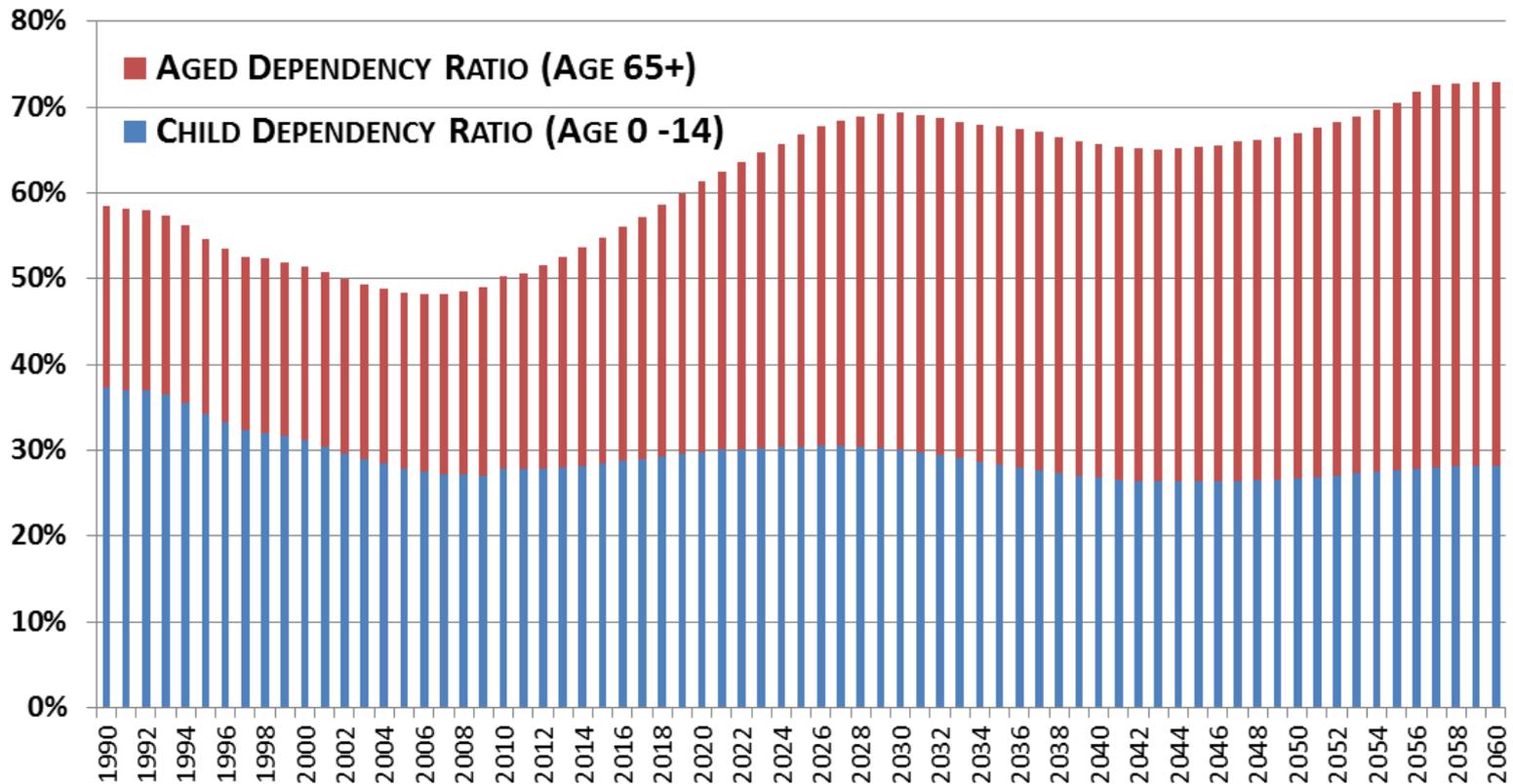
SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

DEPENDENCY RATIO - TOTAL

27

MONTANA DEPENDENCY RATIO BY PART

HISTORIC & PROJECTED, 1990 - 2060



SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

WHAT DOES AN AGING POPULATION MEAN

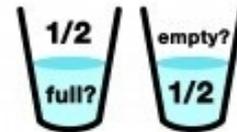
28

**OK... SO WE'RE EXPECTING TO SEE AN AGING POPULATION...
WHY SHOULD WE CARE & WHAT DOES IT MEAN FOR MT?**

**SHOULD WE BE EXCITED ABOUT THIS SHIFT IN
MONTANA'S DEMOGRAPHIC CHARACTERISTICS OR
CONCERNED???**



**THE SHORT ANSWER IS BOTH...
BECAUSE LET'S FACE IT, WHETHER WE
LIKE IT OR NOT IT'S GOING TO HAPPEN...**



WHY DO WE CARE ABOUT AN AGING POPULATION

29

WHY SHOULD WE CARE ABOUT AN AGING POPULATION?

THESE ARE JUST A FEW REASONS...

A SHIFT IN THE SERVICES DEMANDED OF AN
OLDER POPULATION...



CHANGING HOUSING CHARACTERISTIC
NEEDS...



CHANGING COMMUNITY PLANNING GOALS...



WHY DO WE CARE ABOUT AN AGING POPULATION

30

A SHIFT IN THE SERVICES DEMANDED OF AN OLDER POPULATION...



THIS ISSUE IS BROUGHT UP QUITE OFTEN WHEN THE CONVERSATION OF AN AGING POPULATION IS DISCUSSED...

- **INCREASED NEED FOR HOSPITAL AND EMERGENCY RESPONSE SERVICES**
- **INCREASED NEED FOR PUBLIC TRANSPORTATION OR SOME SORT OF ALTERNATE TRANSPORTATION FOR SUCH THINGS AS GROCERIES, CLOTHES SHOPPING, ENTERTAINMENT ACCESS, ETC.**

WHY DO WE CARE ABOUT AN AGING POPULATION

31

CHANGING HOUSING CHARACTERISTIC NEEDS...



AS INDIVIDUALS AGE THE KIND OR TYPE OF HOUSING THEY DEMAND MAY CHANGE

- MOVING OUT OF AN “EMPTY NEST” WITH MULTIPLE LEVELS AND MANY ROOMS
- MOVING INTO SINGLE LEVEL, SMALLER HOMES
- PREFERENCE FOR PROXIMITY TO AMENITIES AND SERVICES CHANGE...
 - DISTANCE TO HOSPITALS, FOR EXAMPLE, BECOMES MORE IMPORTANT AS PERSONAL MOBILITY DECREASES, ON AVERAGE.

WHY DO WE CARE ABOUT AN AGING POPULATION

32

CHANGING HOUSING CHARACTERISTIC NEEDS...



LIKE MOST OF THE INDUSTRIALIZED WORLD, AS THE POPULATION CHANGES THE AVERAGE HOUSEHOLD SIZE FALLS...

- *“IN THE UNITED STATES, HOUSEHOLD SIZE HAS NEARLY HALVED SINCE 1790, DROPPING FROM 5.8 PERSONS PER HOUSEHOLD TO 3.0 IN 1973.”*

SOURCE: FRANCES E. K. (1976). *THE FALL IN HOUSEHOLD SIZE AND THE RISE OF THE PRIMARY INDIVIDUAL IN THE UNITED STATES*. DEMOGRAPHY. VOL. 13 NUM. 1.

	1990	2000	2010
% 1-person Households in MT	26%	27%	30%

Source: US Census Bureau – Decennial Censuses

WHY DO WE CARE ABOUT AN AGING POPULATION

33



CHANGING COMMUNITY PLANNING GOALS...

THIS IDEA IS AN OVER-ARCHING TOPIC WHICH INCLUDES THE PREVIOUS ISSUES (HOUSING & SERVICES)...

THE IDEA OF HOW WE'LL PLAN OUR COMMUNITIES' LAYOUTS MOVING INTO THE FUTURE...

- SWITCHING FROM SINGLE-FAMILY MULTI-ROOM HOUSING DEVELOPMENTS TO MORE SMALLER CONDO, TOWNHOUSE, OR ASSISTED LIVING TYPE DEVELOPMENTS POTENTIALLY
- INCREASING EASE-OF-ACCESS TO PUBLIC AND PRIVATE FACILITIES
- MANY OTHERS...

WHAT DOES AN AGING POPULATION MEAN FOR MT

34

WHAT DOES AN AGING POPULATION MEAN FOR THE STATE?

THESE ARE JUST A COUPLE THINGS...

AVAILABLE WORKFORCE IN THE STATE...



A SHIFT IN INCOME SOURCES WITHIN MONTANA...



WHAT DOES AN AGING POPULATION MEAN FOR MT

35

AVAILABLE WORKFORCE IN THE STATE...



AN INCREASING DEPENDENCY RATIO IN MONTANA
TRANSLATES TO FEWER *CONVENTIONAL* WORKERS
AVAILABLE RELATIVE TO THE STATE'S POPULATION

THAT'S BAD RIGHT???



I WOULD ARGUE IT ISN'T ALL BAD...



WHAT DOES AN AGING POPULATION MEAN FOR MT

36



AVAILABLE WORKFORCE IN THE STATE...

YES... HAVING FEWER CONVENTIONAL POTENTIAL WORKERS IN THE POPULATION IS NOT IDEAL...

- LABOR SHORTAGES WITHIN THE ECONOMY CAN DRIVE UP WAGES – WHICH IS GREAT FOR THE WORKER – BUT ISN'T AS APPEALING TO BUSINESSES
- THIS MAY ALSO DETRACT FROM NEW BUSINESS INVESTMENT

HOWEVER, THIS IS NOT UNIQUE TO MONTANA...

- THIS TREND IS HAPPENING ACROSS THE NATION AND THE INDUSTRIALIZED WORLD... SO, IN GENERAL, EVERY ECONOMY IS GOING TO BE DEALING WITH THIS...

WHAT DOES AN AGING POPULATION MEAN FOR MT

37

AVAILABLE WORKFORCE IN THE STATE...



HOWEVER, THERE ARE OTHER FACTORS THAT MAY OFF-SET THIS IMPACT...

- **PEOPLE ARE CONTINUING TO WORK PAST “CONVENTIONAL RETIREMENT AGE” – WHETHER THEY WANT TO OR NOT – AND THAT TREND IS EXPECTED TO CONTINUE**
- **INSTITUTIONAL KNOWLEDGE IS KEPT WITHIN THE WORKFORCE FOR A LONGER PERIOD OF TIME WHICH ADDS LABOR PRODUCTIVITY THAT WOULD BE LOST OTHERWISE...**

WHAT DOES AN AGING POPULATION MEAN FOR MT

38

A SHIFT IN INCOME SOURCES WITHIN MONTANA...

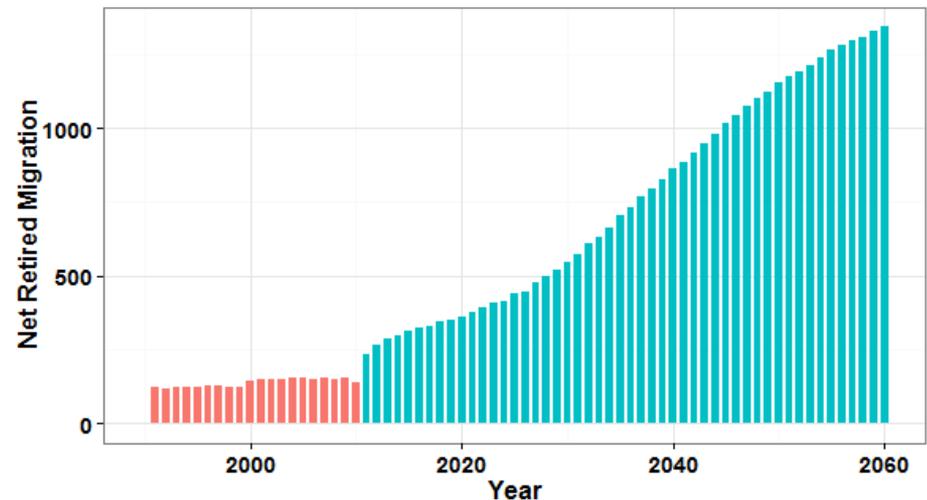


REMEMBER, THE AGING OF MONTANA'S POPULATION IS DUE NOT ONLY TO EXISTING RESIDENTS AGING IN PLACE...

THERE IS A SIGNIFICANT NUMBER OF RETIRED MIGRANTS WHO ARE EXPECTED TO MOVE INTO THE STATE AS WELL WHO CONTRIBUTE TO THAT TREND...

Montana Historic & Projected Net Retired Migration

Source: eREMI - Released April 2013



WHAT DOES AN AGING POPULATION MEAN FOR MT

39

A SHIFT IN INCOME SOURCES WITHIN MONTANA...



GENERALLY SPEAKING, INDIVIDUALS WHO MOVE TO AN AREA FOR RETIREMENT CAN BECAUSE THEY'RE FINANCIALLY ABLE TO DO SO...

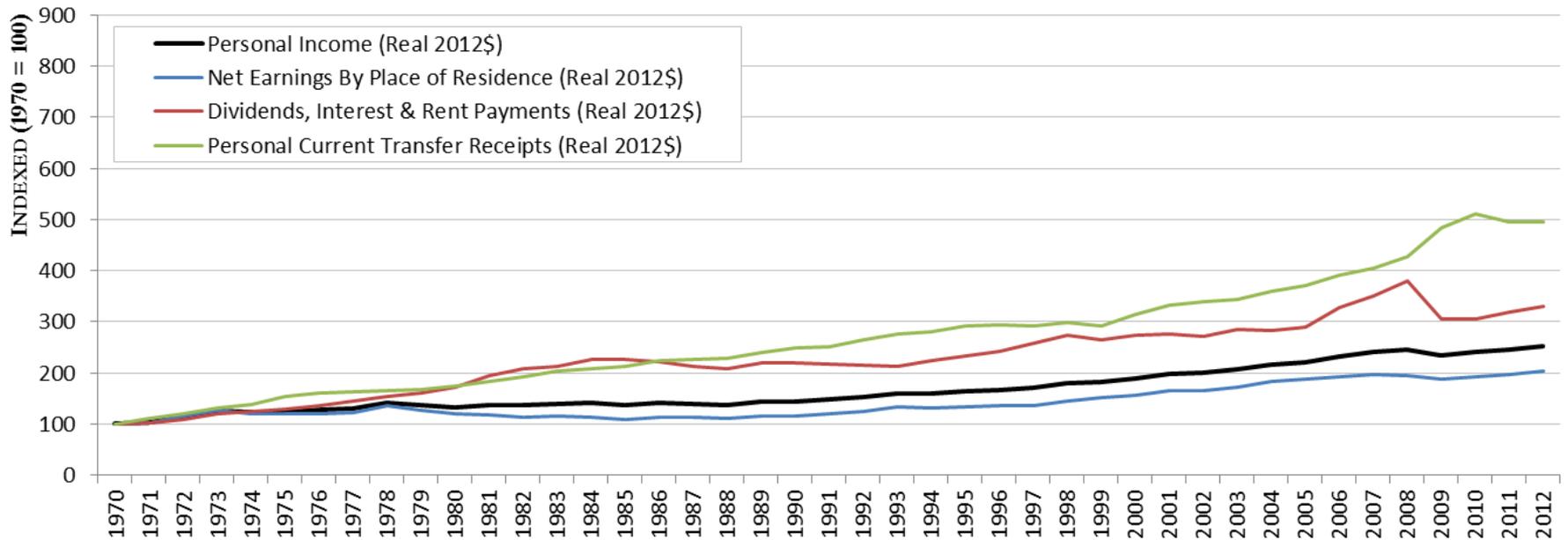
THESE RETIREES ARE BRINGING WITH THEM INCOME THEY'VE EARNED WHILE WORKING ELSEWHERE...

BASIC SECTOR \$\$ COMING INTO MONTANA... THAT'S WHAT ECONOMIC DEVELOPMENT IS ALL ABOUT, ISN'T IT?

WHAT DOES AN AGING POPULATION MEAN FOR MT

40

COMPONENTS OF PERSONAL INCOME , MONTANA 1970 - 2012
 FIGURES ARE INDEXED (1970 = 100)



SOURCE: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS. DATA LAST UPDATED MARCH 2013

PERSONAL INCOME

41

PERSONAL INCOME IS MADE UP OF THREE PARTS:

1. **NET EARNINGS BY PLACE OF RESIDENCE**

- WAGE AND SALARY EARNINGS FROM WORKING – ADJUSTED TO ACCOUNT FOR PEOPLE WORKING/LIVING IN DIFFERENT PLACES

2. **DIVIDENDS, INTEREST & RENT PAYMENTS**

- INVESTMENT INCOME, RENTAL PROPERTIES, ETC.

3. **PERSONAL CURRENT TRANSFER RECEIPTS**

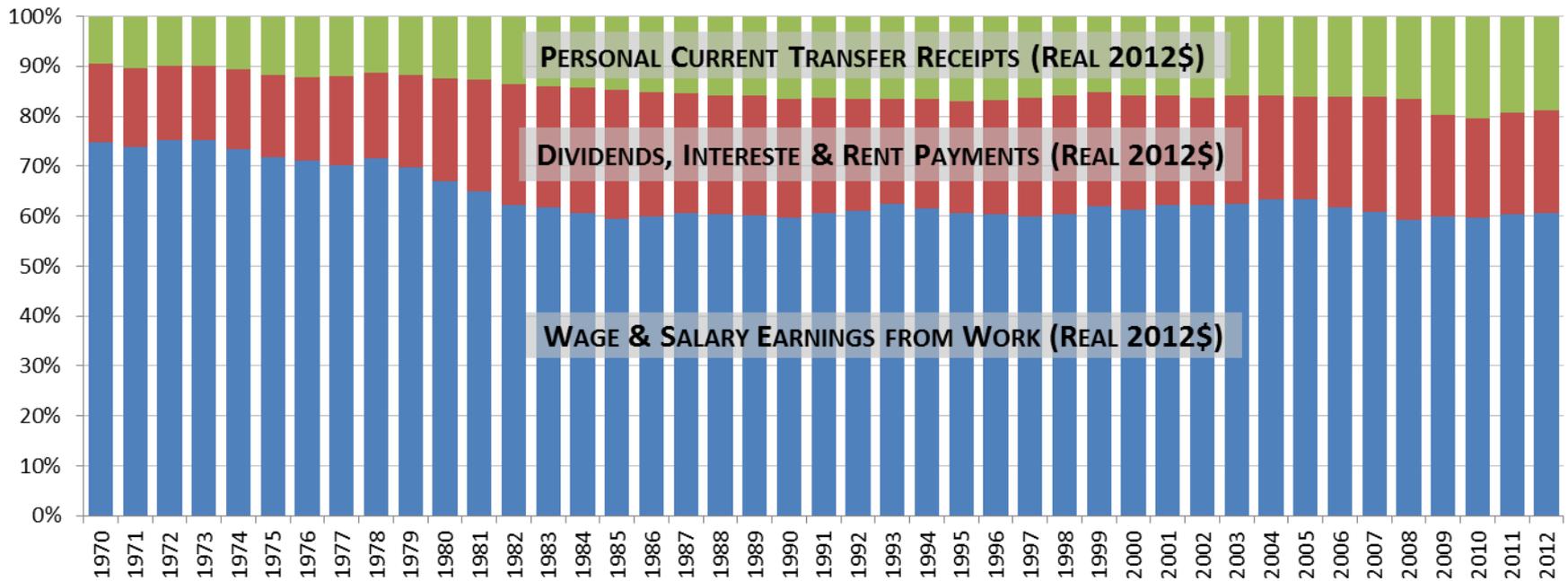
- GOVERNMENT SOCIAL BENEFITS SUCH AS SOCIAL SECURITY, MEDICARE, AND UNEMPLOYMENT INSURANCE
- INCOME FOR WHICH NO CURRENT SERVICES ARE PERFORMED SUCH AS NET INSURANCE SETTLEMENTS



PERSONAL INCOME

42

COMPONENT SHARE OF PERSONAL INCOME, MONTANA 1970 - 2012
 FIGURES ARE ADJUSTED FOR INFLATION (REAL 2012\$)



SOURCE: US DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS. DATA LAST UPDATED MARCH 2013

OVER TIME, THE PROPORTIONAL SHARE OF EACH COMPONENT THAT MAKES UP PERSONAL INCOME HAS SHIFTED.

SUMMARY

43

MONTANA'S OVERALL POPULATION IS PROJECTED TO CONTINUE TO GROW... HOWEVER, THE POPULATION AS A WHOLE IS EXPECTED TO BECOME OLDER...

AN OLDER POPULATION WILL UNDOUBTEDLY CREATE NEW ISSUES & OBSTACLES THAT WE, AS A STATE, HAVE NOT ENCOUNTERED BEFORE...

IF WE RECOGNIZE AND START THINKING ABOUT THIS REALITY NOW, WE CAN CAPITALIZE ON THE PROS AND HELP MITIGATE THE CONS THAT COME ALONG WITH AN AGING POPULATION...



QUESTIONS???

44

CONTACT INFORMATION

JOE RAMLER,
SENIOR ECONOMIST
JRAMLER@MT.GOV

MONTANA DEPARTMENT OF COMMERCE
CENSUS & ECONOMIC INFORMATION CENTER
406.841.2740



**EVERYTHING YOU'VE SEEN HERE TODAY
AND MORE IS AVAILABLE AT:**



WWW.CEIC.MT.GOV

