

MONTANA'S POPULATION LOOKING FORWARD

1

PRESENTATION AT:
MT ASSOCIATION OF PLANNERS
ANNUAL CONFERENCE
SEPTEMBER 2013

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CENSUS & ECONOMIC INFORMATION CENTER (CEIC)
MONTANA DEPARTMENT OF COMMERCE
WWW.CEIC.MT.GOV | 406.841.2740



WHAT ARE WE TALKING ABOUT TODAY...

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- **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
- **PERSONAL INCOME IN MONTANA**
 - HOW DEMOGRAPHICS AFFECT PERSONAL INCOME TRENDS
- **A FEW IMPORTANT TRENDS FOR PLANNERS**
 - AGING & INCOME
 - HOUSING & VALUE

DATA SOURCE & INFORMATION

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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

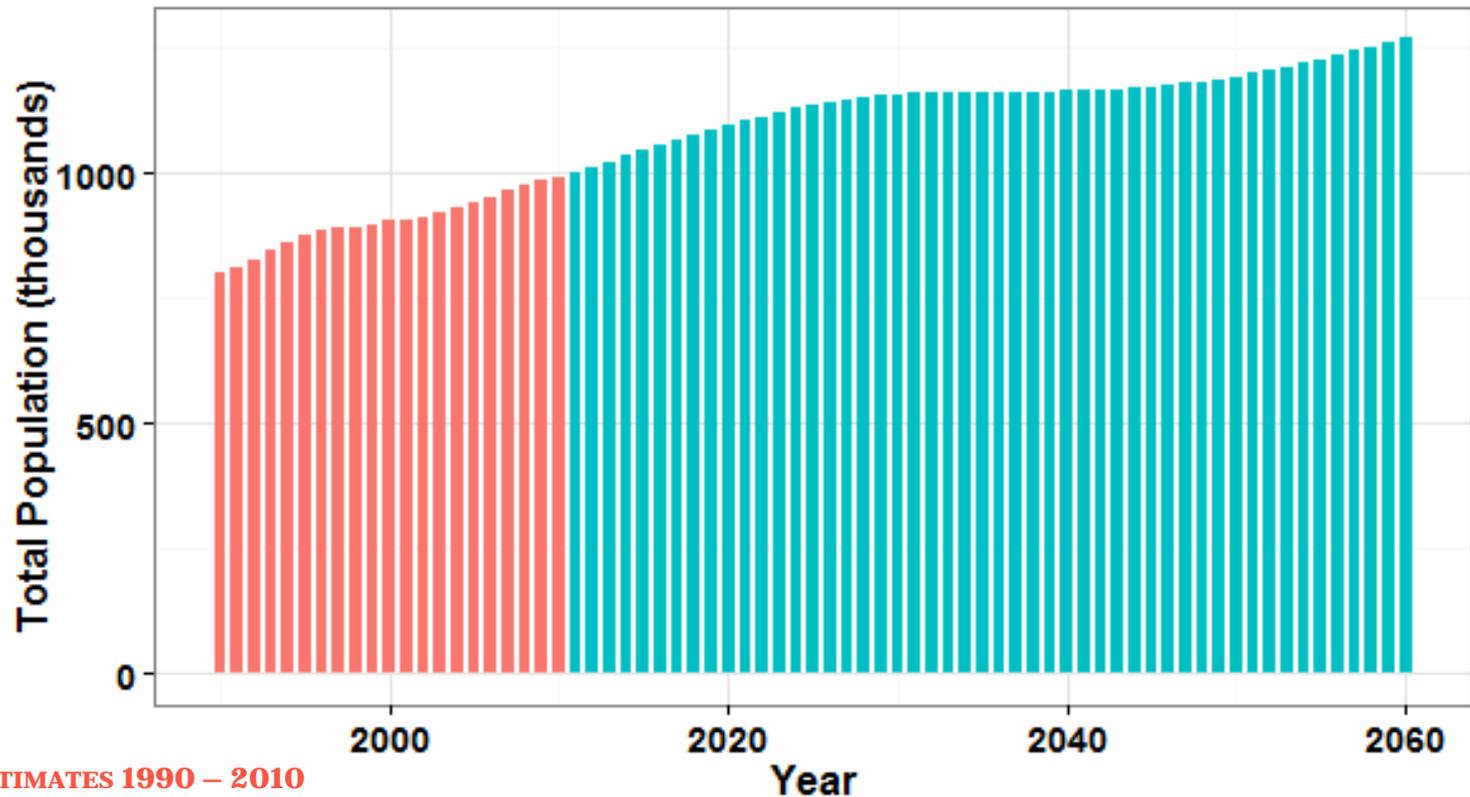


MONTANA TOTAL POPULATION

4

Montana Historic & Projected Total Population

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

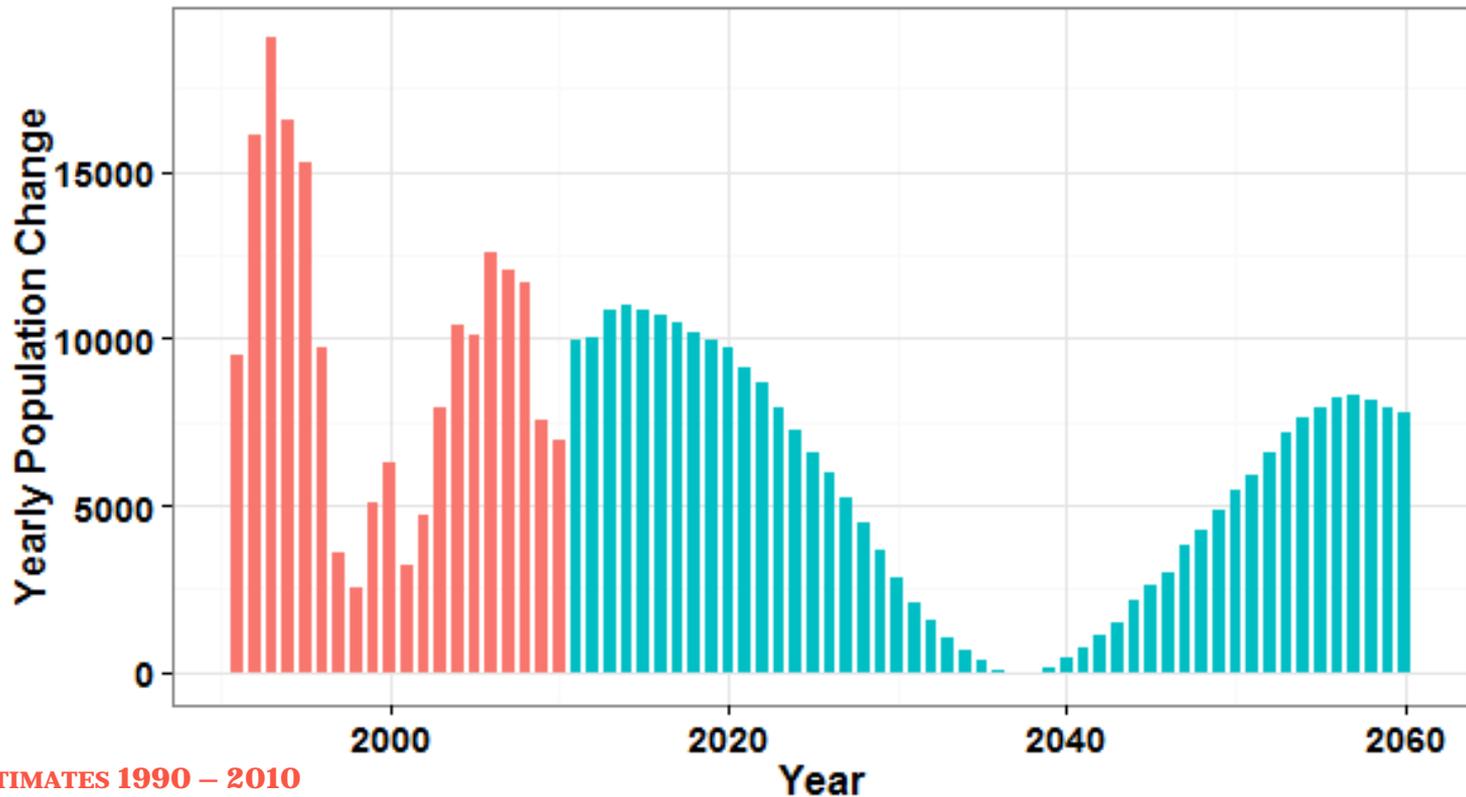
PROJECTED FIGURES 2011 - 2060

YEARLY POPULATION CHANGE

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Montana Historic & Projected Yearly Population Change

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

COMPONENTS OF POPULATION CHANGE

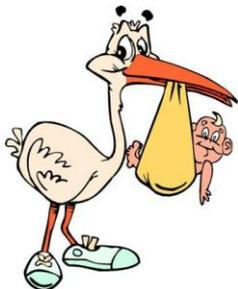
6

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 - ???????

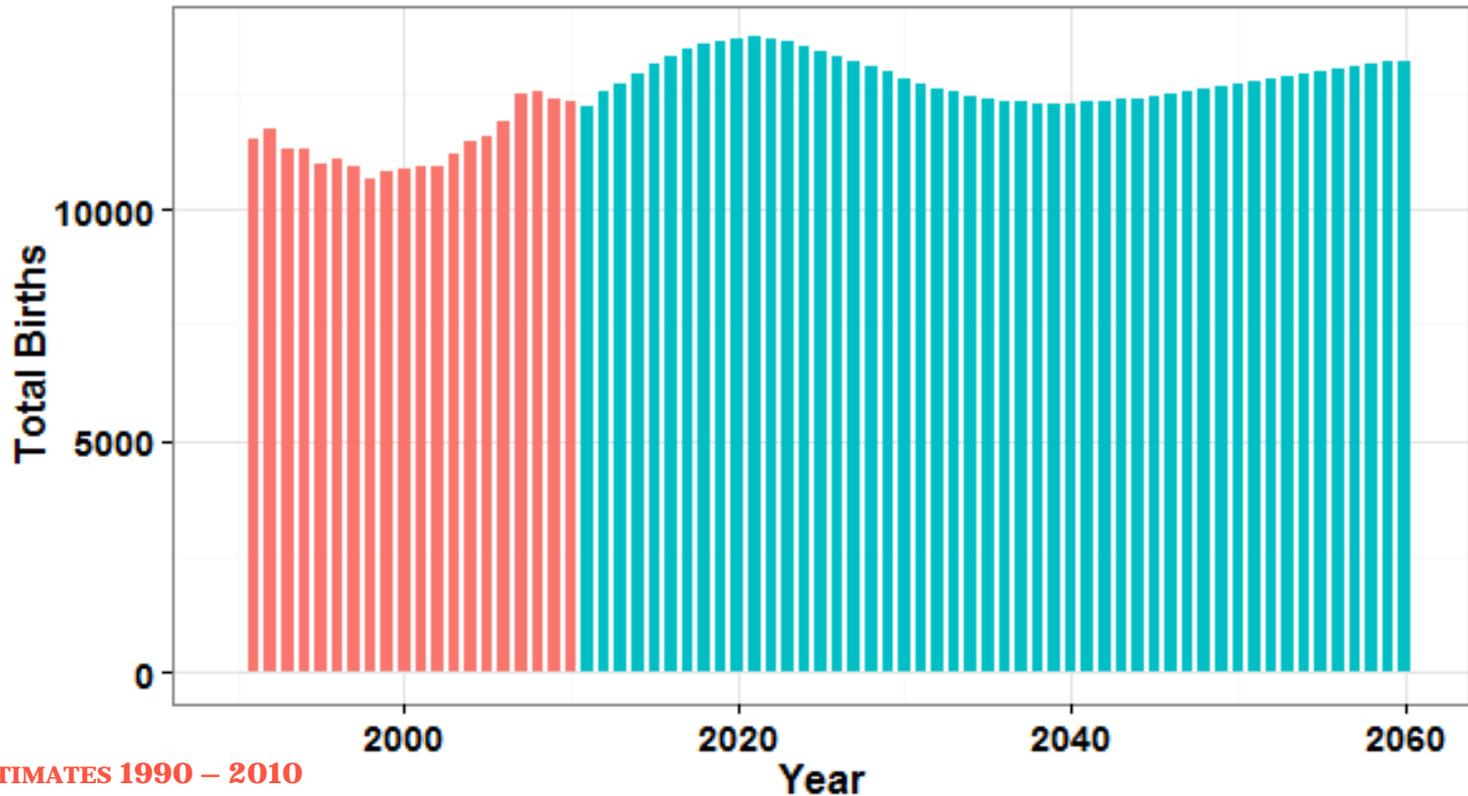
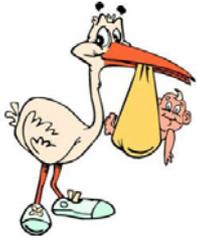


NATURAL CHANGE - BIRTHS

7

Montana Historic & Projected Total Births

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

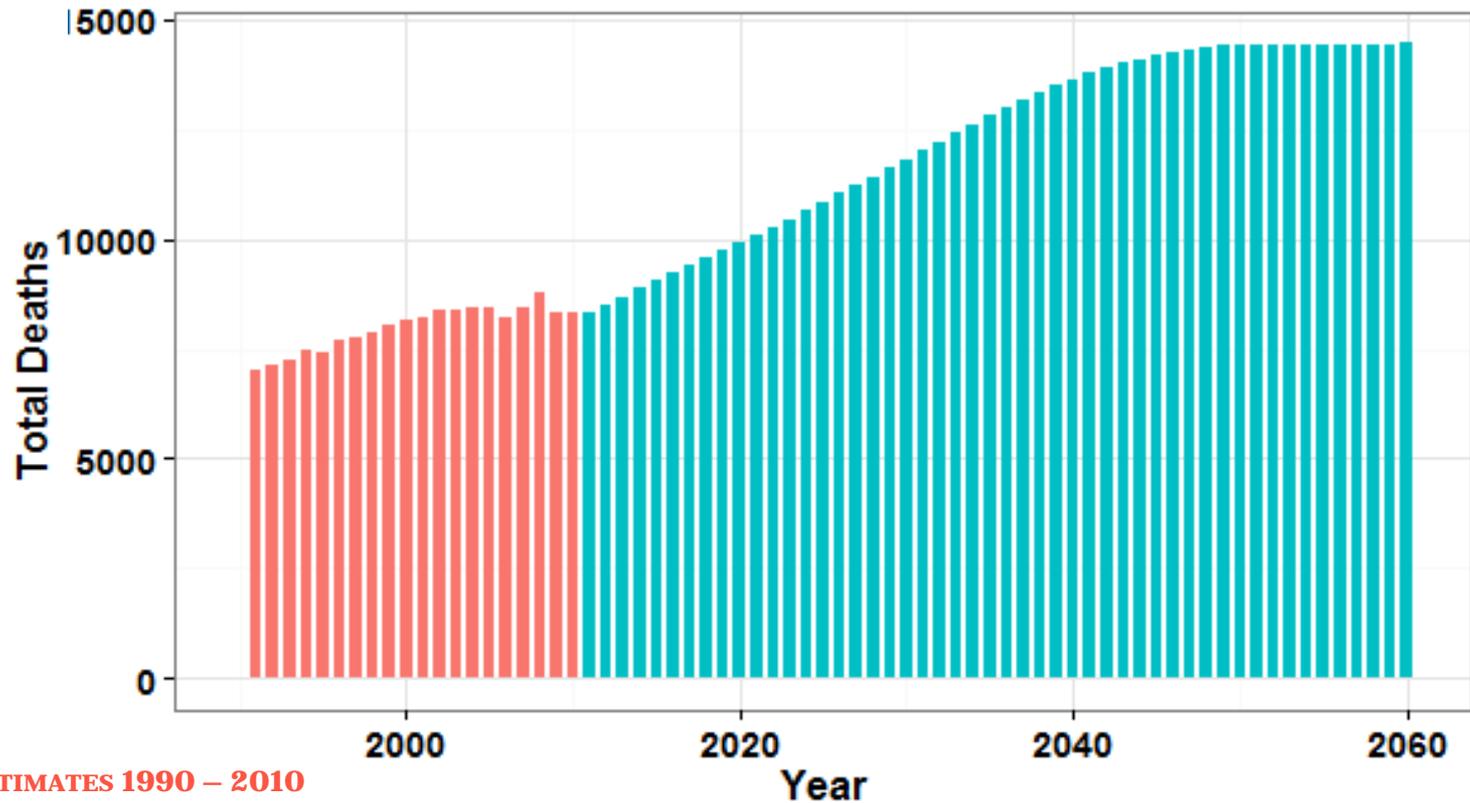
NATURAL CHANGE - DEATHS

8



Montana Historic & Projected Total Deaths

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

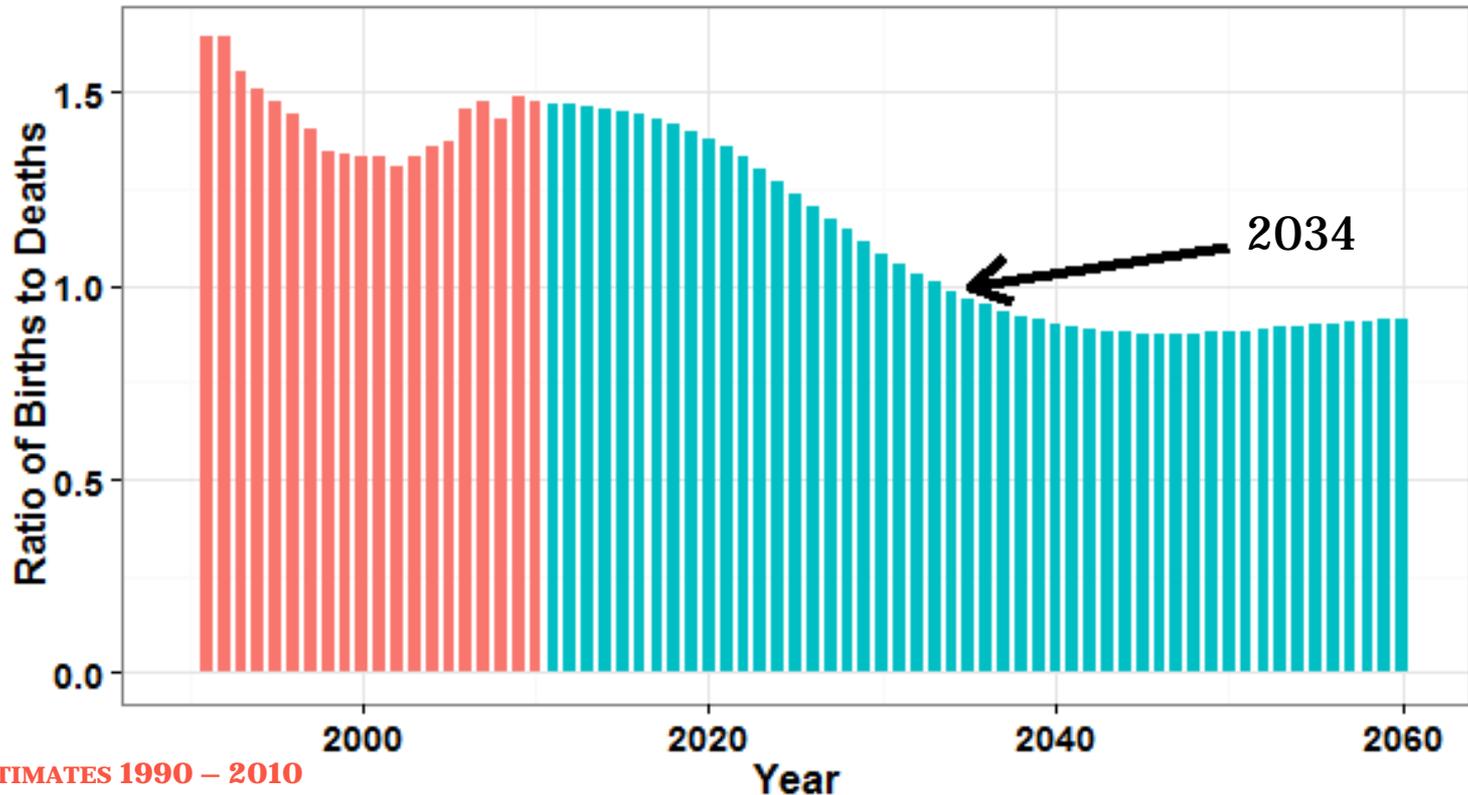
RATIO OF BIRTHS TO DEATHS

“REPLACEMENT RATE”

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Montana Historic & Projected Ratio of Births to Deaths

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

PROJECTED FIGURES 2011 - 2060

TOTAL NET MIGRATION

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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

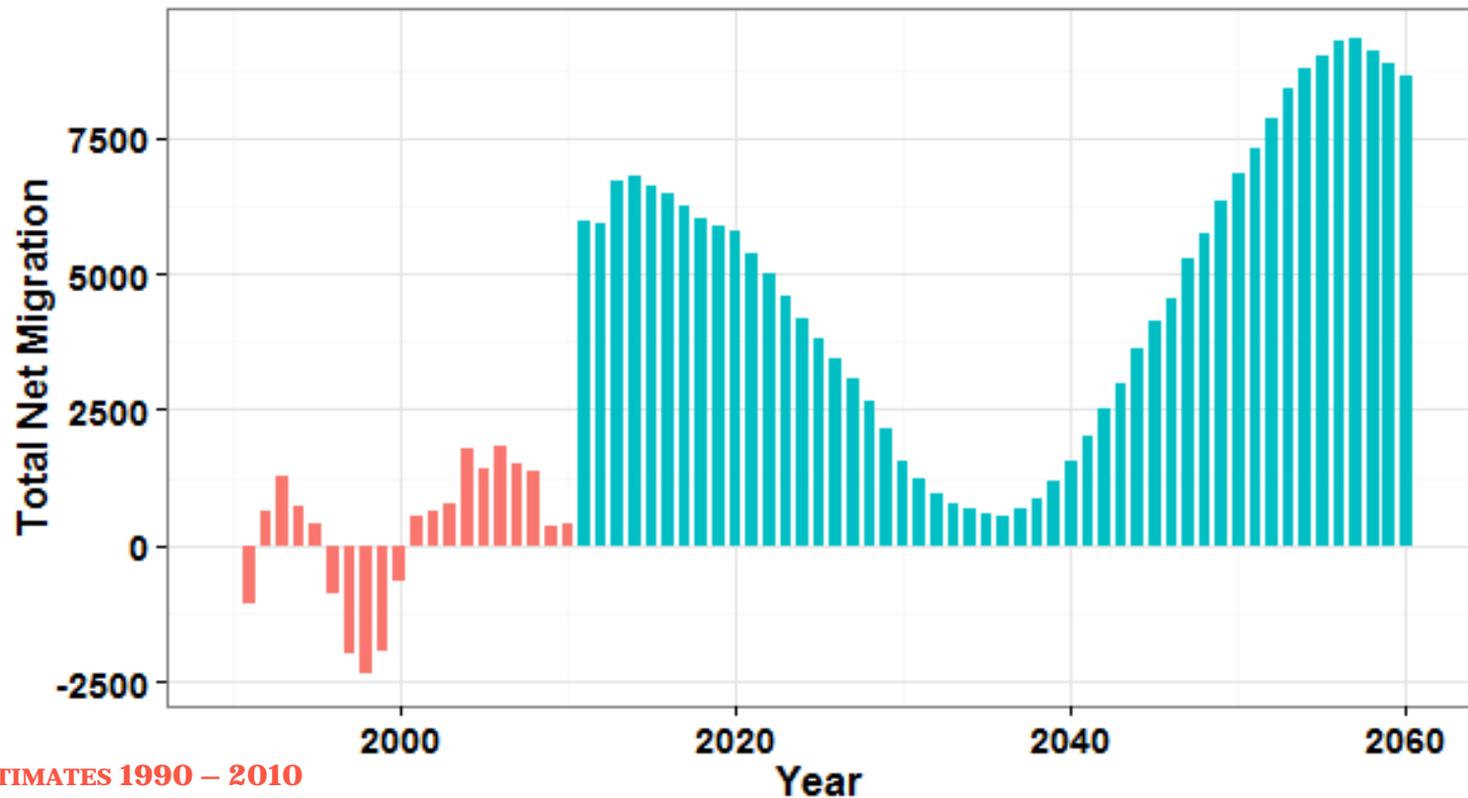
PEOPLE MOVING INTO AN AREA FROM ANOTHER COUNTRY

TOTAL NET MIGRATION

11

Montana Historic & Projected Total Net Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

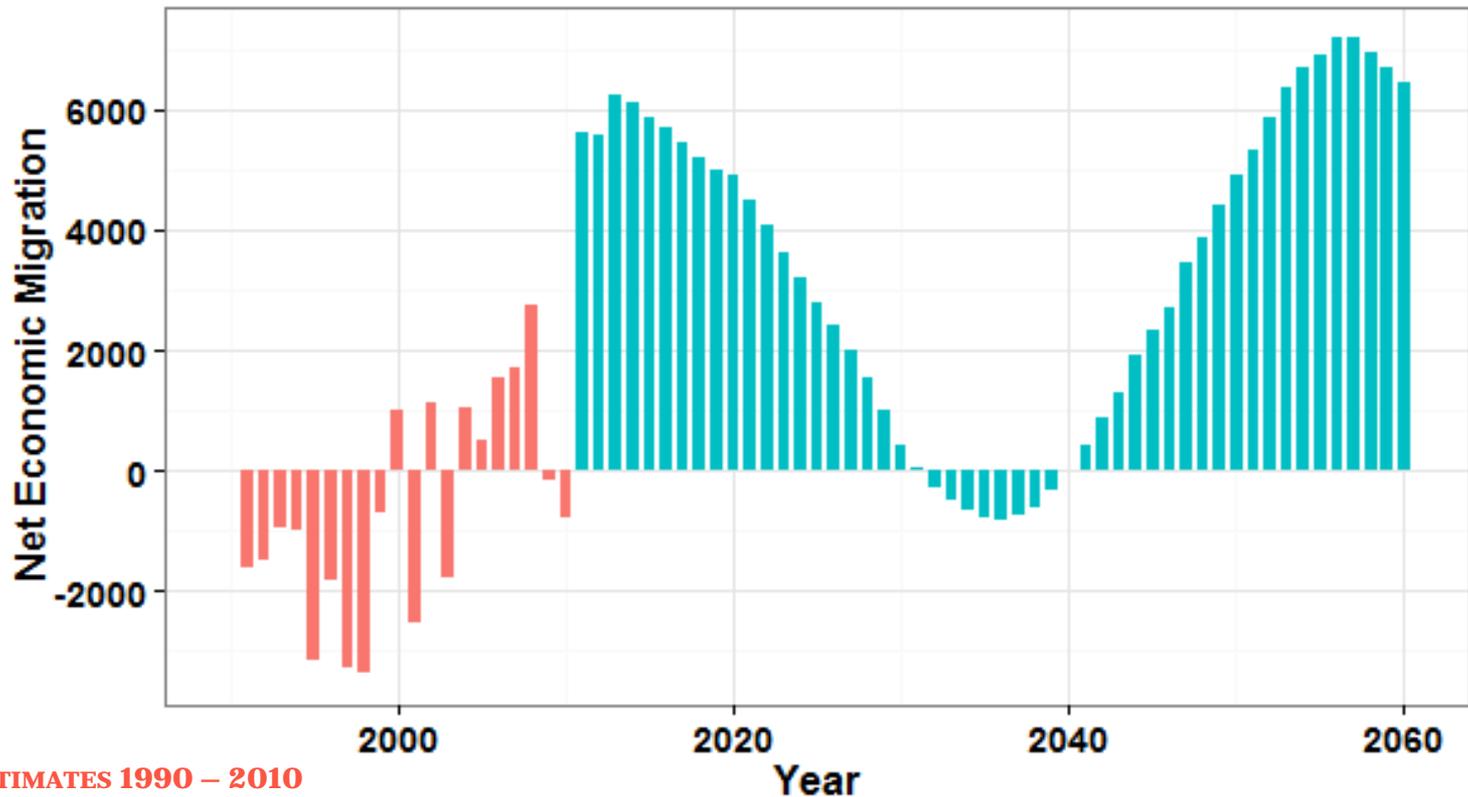
PROJECTED FIGURES 2011 - 2060

NET ECONOMIC MIGRATION

12

Montana Historic & Projected Net Economic Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

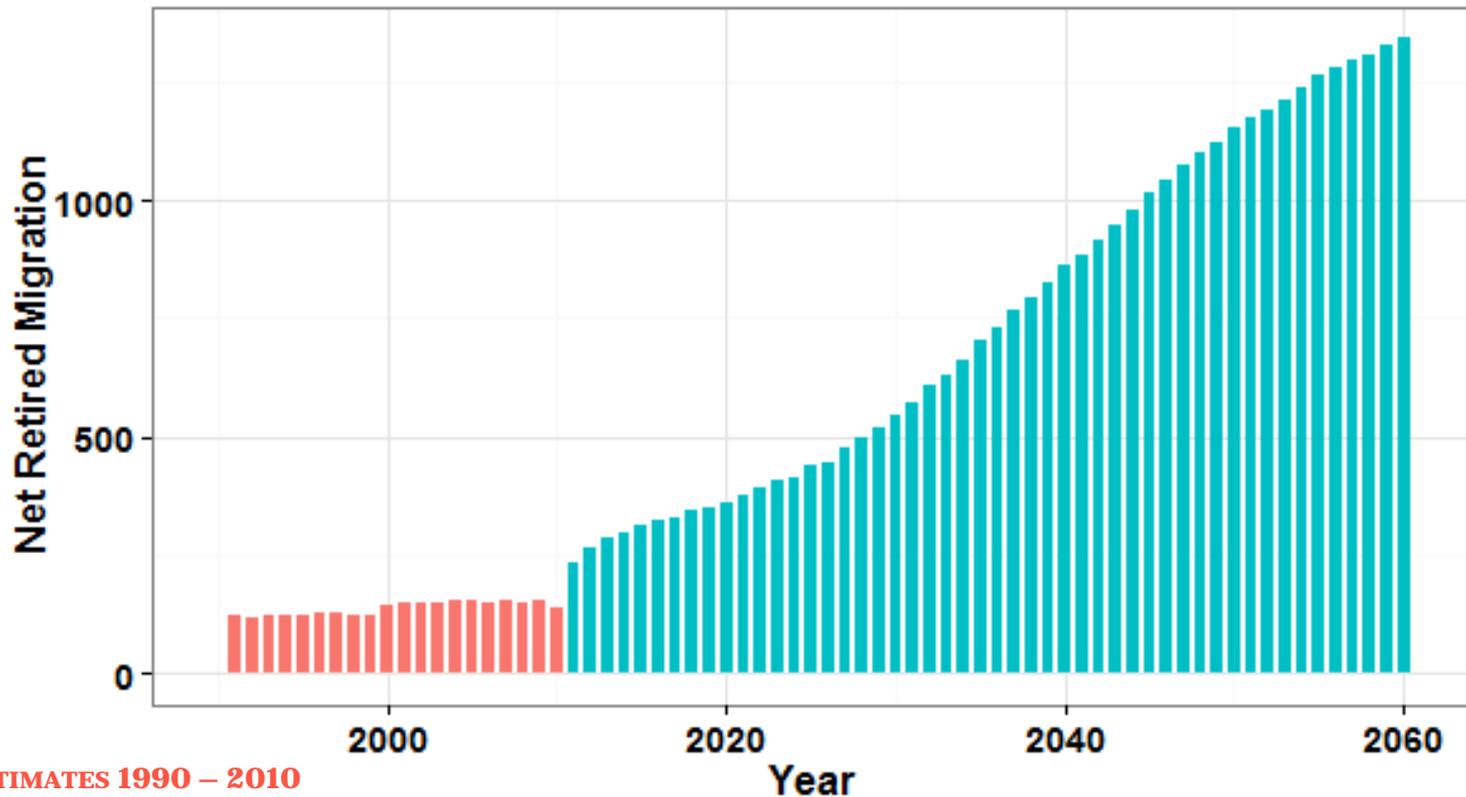
PROJECTED FIGURES 2011 - 2060

NET RETIRED MIGRATION

13

Montana Historic & Projected Net Retired Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

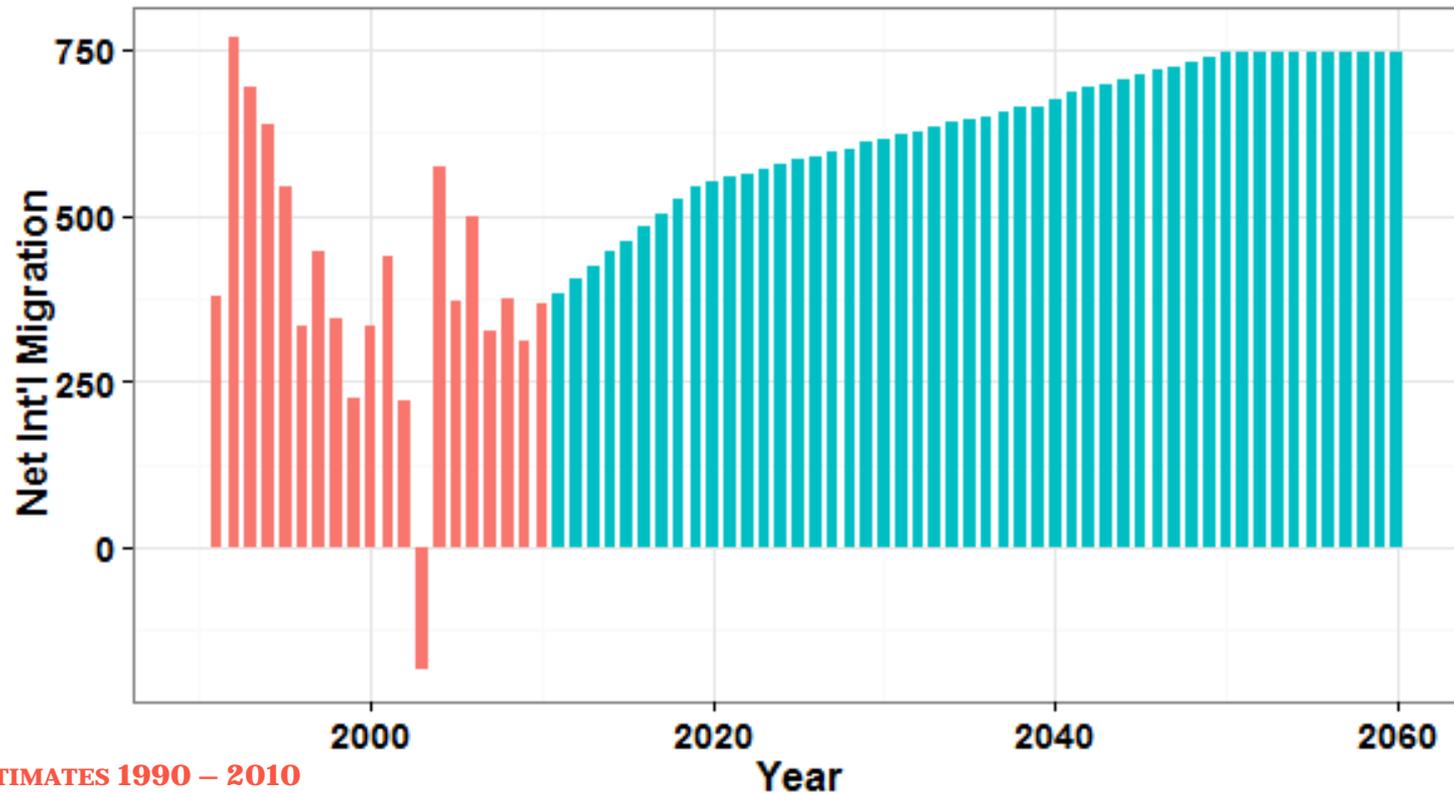
PROJECTED FIGURES 2011 - 2060

NET INTERNATIONAL MIGRATION

14

Montana Historic & Projected Net International Migration

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

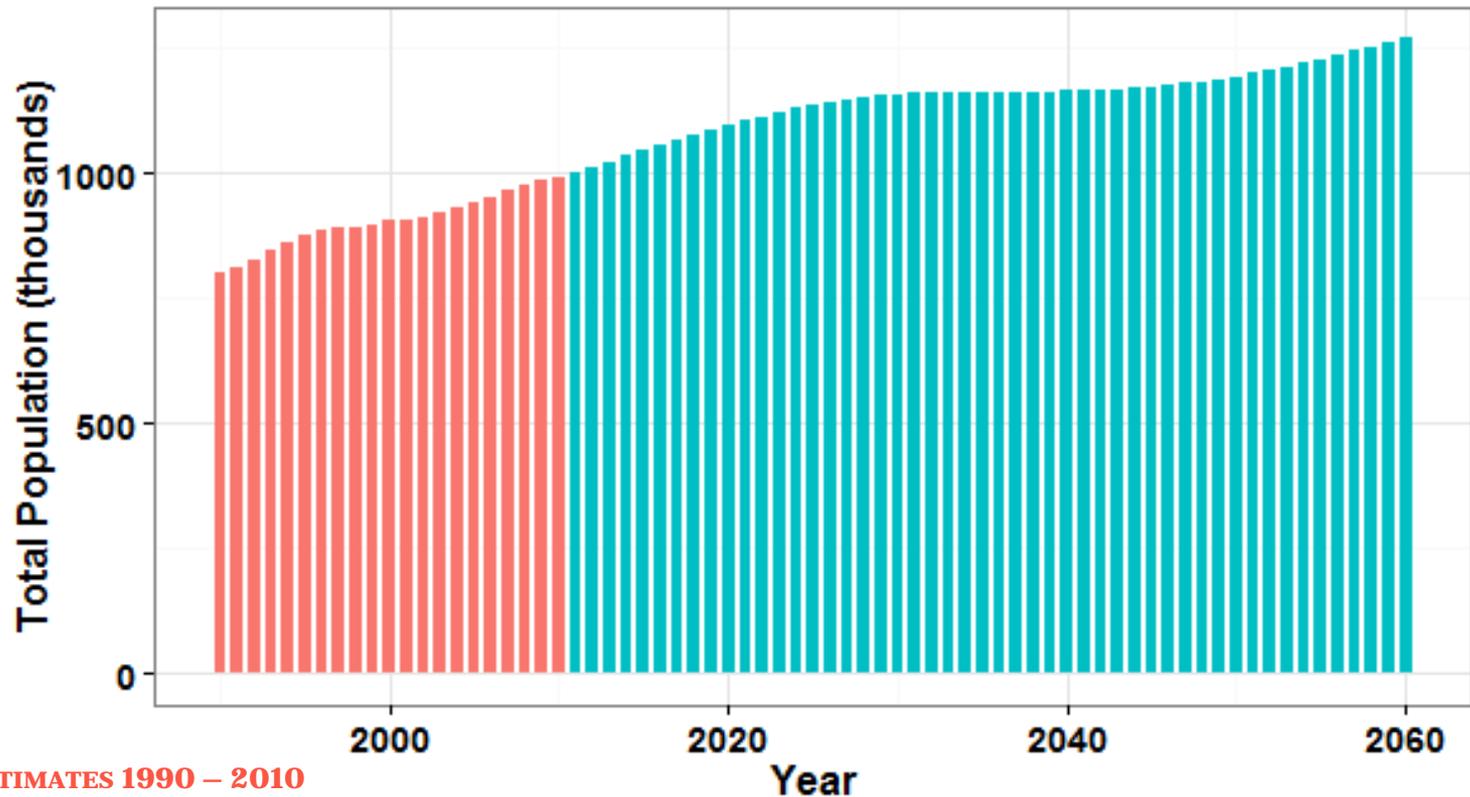
PROJECTED FIGURES 2011 - 2060

MONTANA TOTAL POPULATION... AGAIN

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Montana Historic & Projected Total Population

Source: eREMI - Released April 2013



HISTORIC ESTIMATES 1990 – 2010

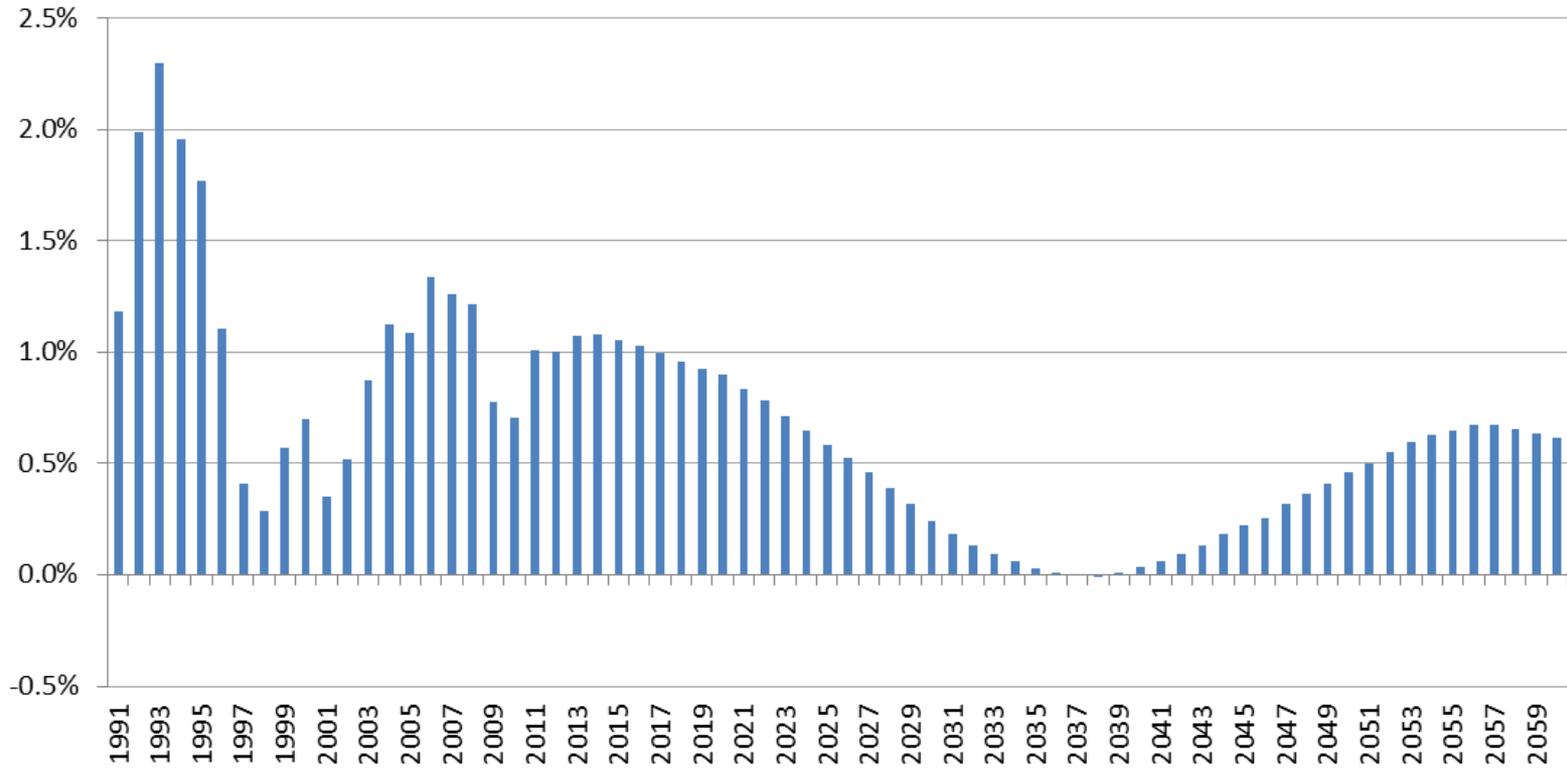
PROJECTED FIGURES 2011 - 2060

MONTANA POPULATION CHANGE

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MONTANA POPULATION YEAR OVER YEAR % CHANGE

HISTORIC & PROJECTED FIGURES, 1990 - 2060



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

WHAT HAVE WE CONCLUDED SO FAR...

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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**

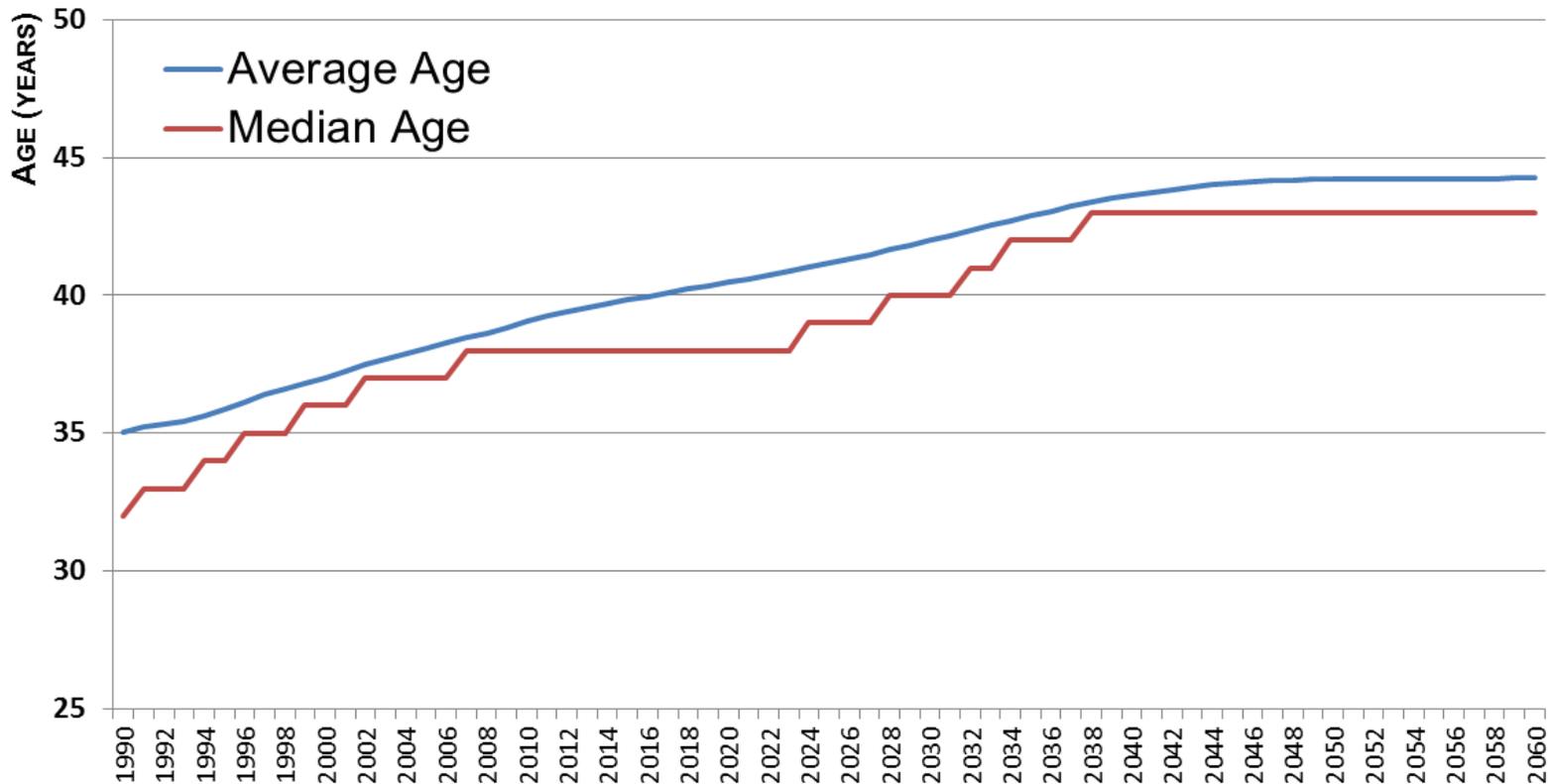
HOWEVER, RETIRED MIGRATION IS EXPECTED TO GROW INTO THE FUTURE....

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

AVERAGE & MEDIAN AGE

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MONTANA HISTORIC & PROJECTED AVERAGE AND MEDIAN AGE, 1990 - 2060

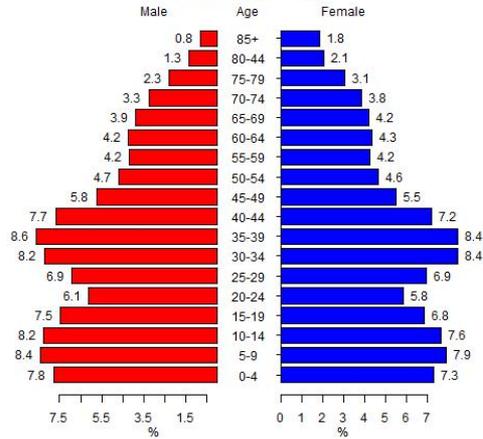


SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

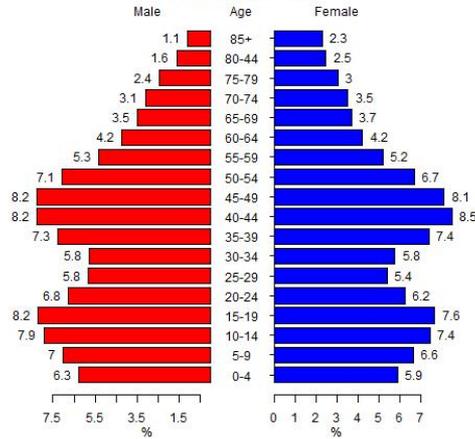
MT POPULATION AGE DISTRIBUTION

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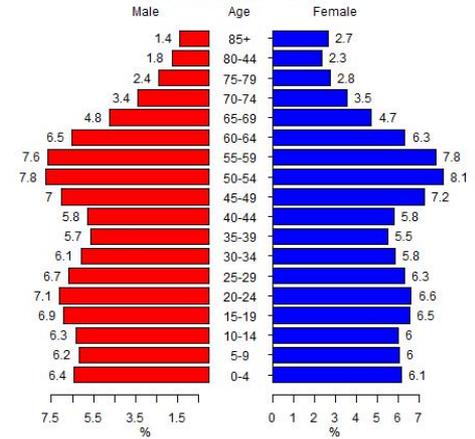
Montana Total - 1990



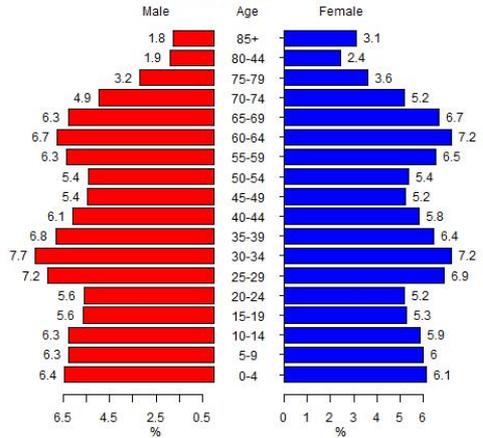
Montana Total - 2000



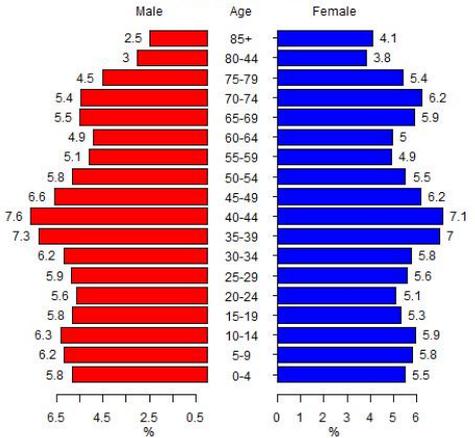
Montana Total - 2010



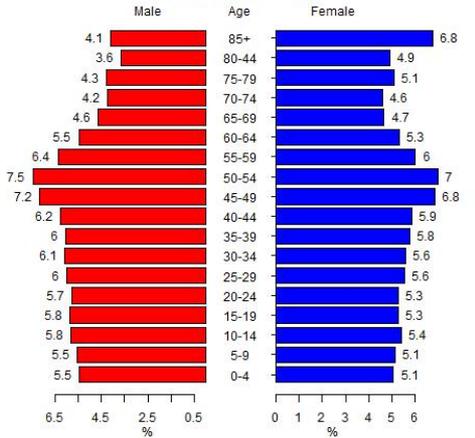
Montana Total - 2020



Montana Total - 2030



Montana Total - 2040



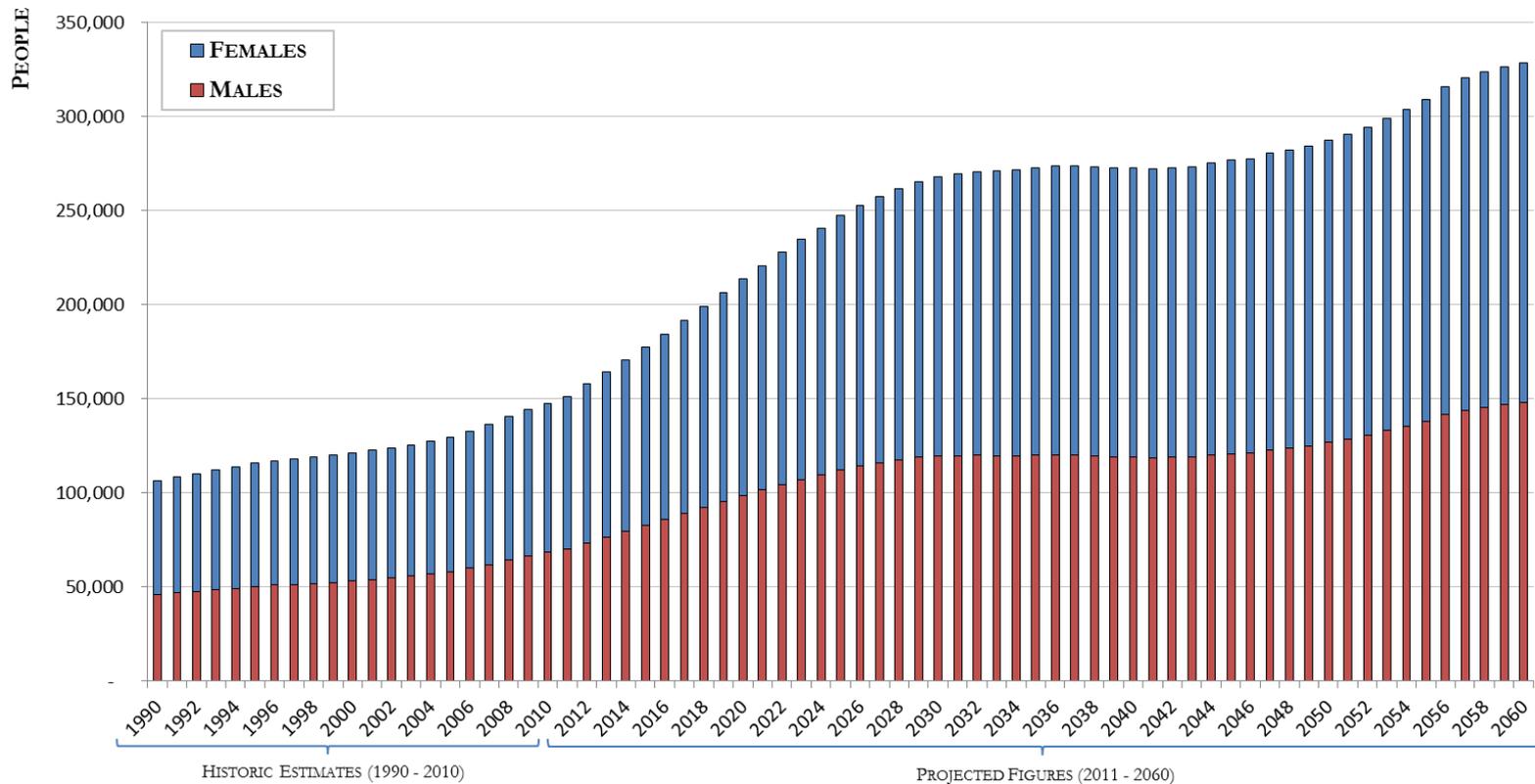
Montana Population Age 65+

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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

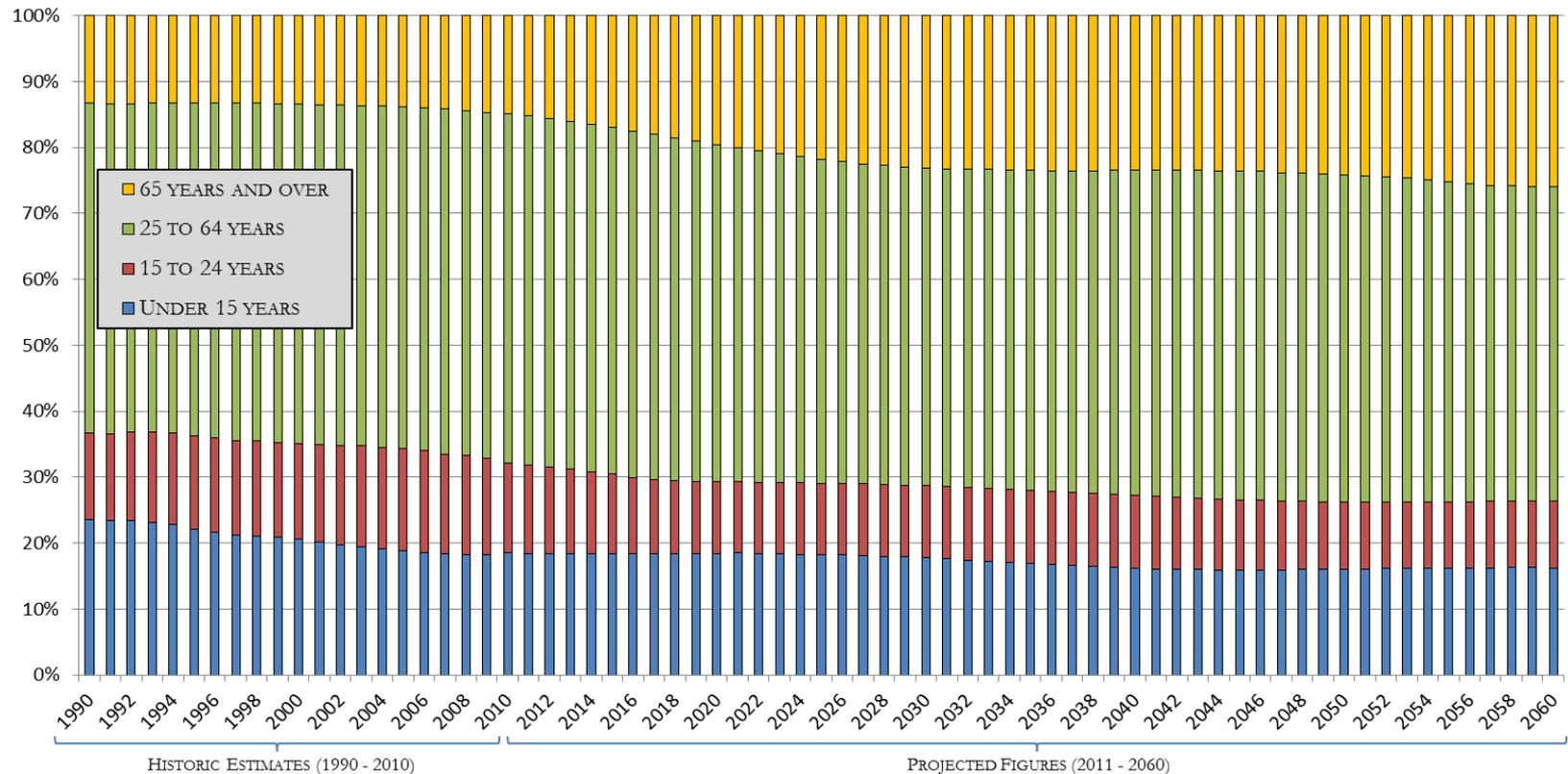


COMPILED BY THE CENSUS & ECONOMIC INFORMATION CENTER, MT DEPARTMENT OF COMMERCE (WWW.CEIC.MT.GOV)

Montana Population by Age Groups

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

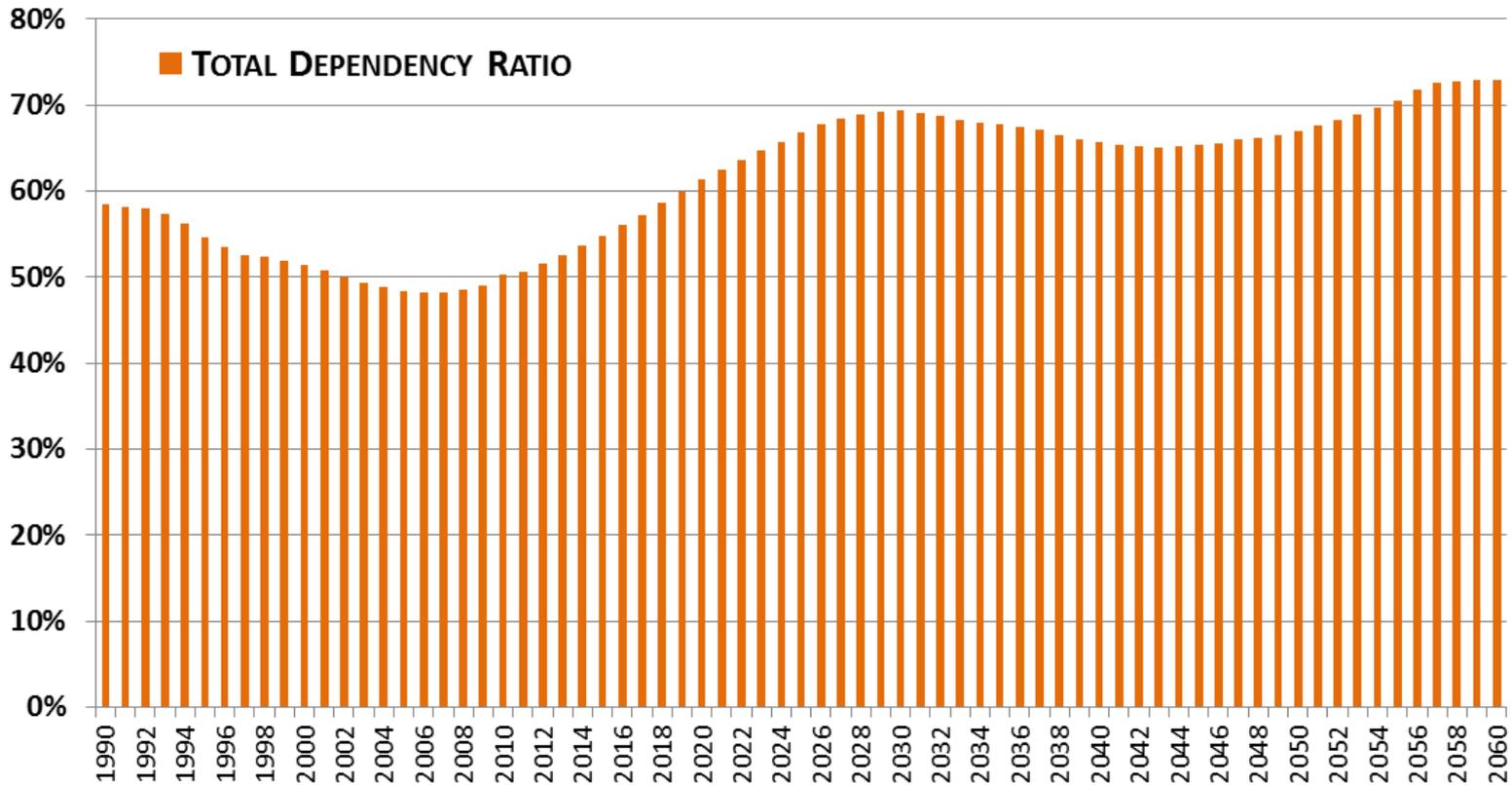
HISTORIC ESTIMATES FOR 1990 - 2010; PROJECTED FIGURES FOR 2011 - 2060
 SOURCE: EREMI - A PRODUCT OF REGIONAL ECONOMIC MODELS, INC. - RELEASED APRIL 2013



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

DEPENDENCY RATIO

MONTANA TOTAL DEPENDENCY RATIO HISTORIC & PROJECTED, 1990 - 2060



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

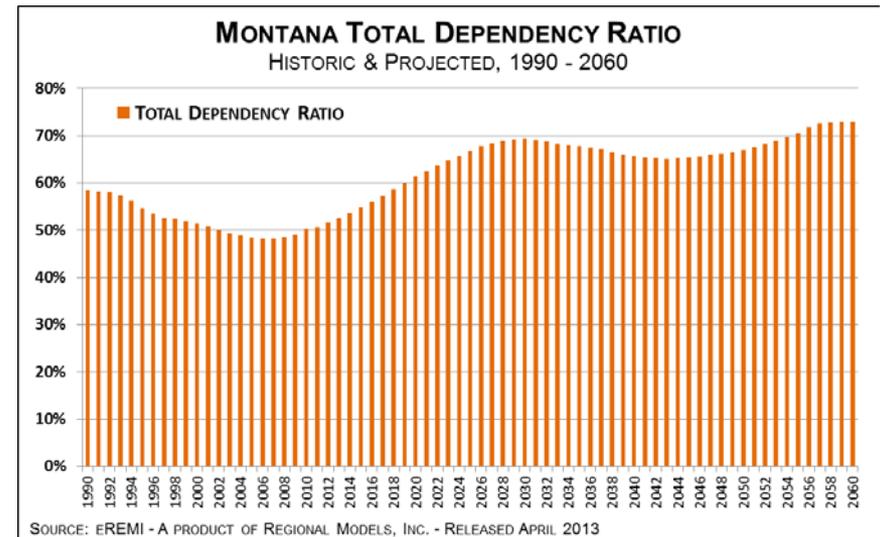
WHAT IS A DEPENDENCY RATIO???

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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???

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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



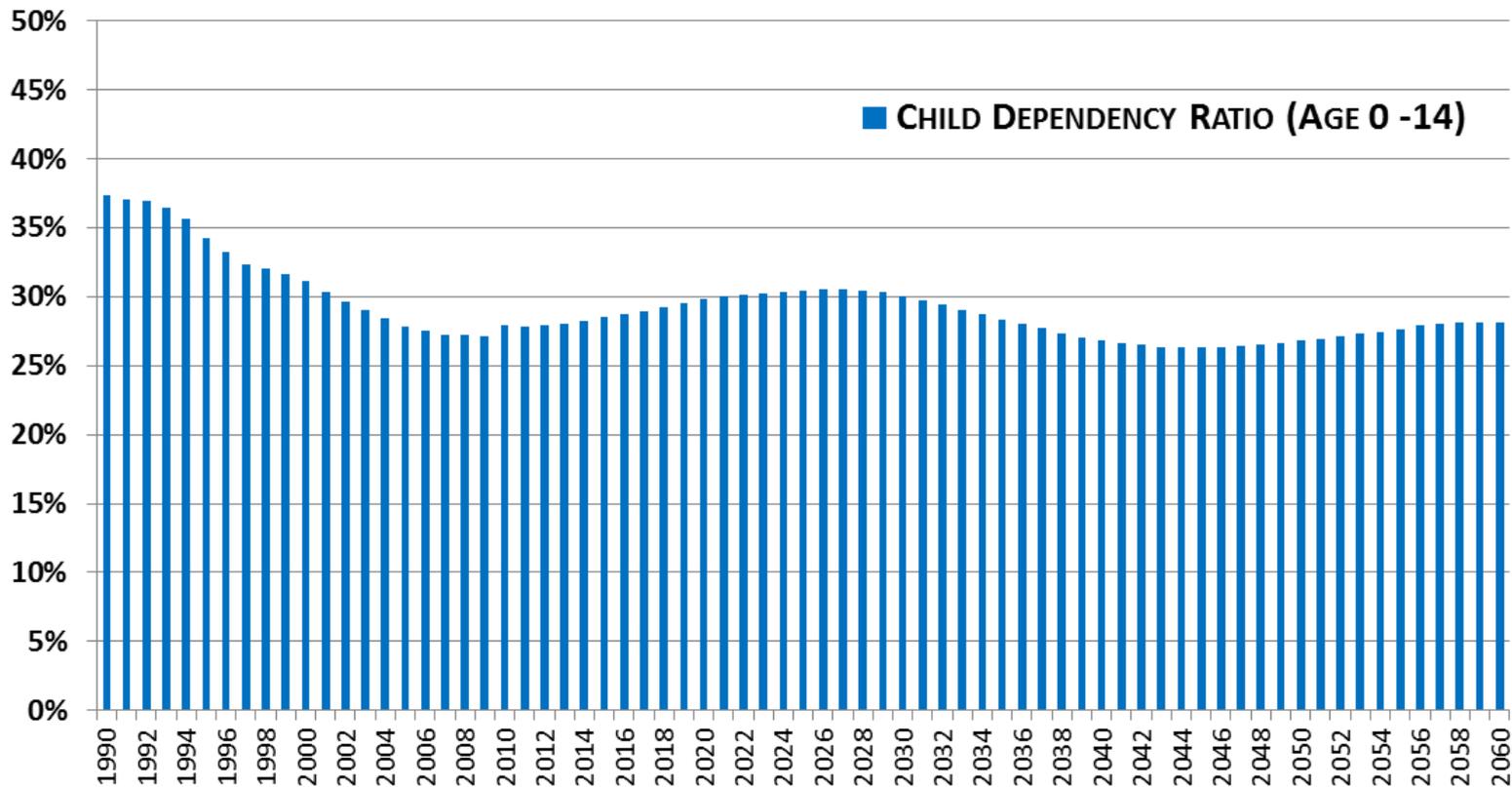
$$\text{Aged Dependency Ratio} = \frac{(\text{number of people aged } 65 \text{ years and over})}{(\text{number of people aged } 15 - 64)} * 100$$

DEPENDENCY RATIO - CHILD

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MONTANA CHILD DEPENDENCY RATIO

HISTORIC & PROJECTED , 1990 - 2060



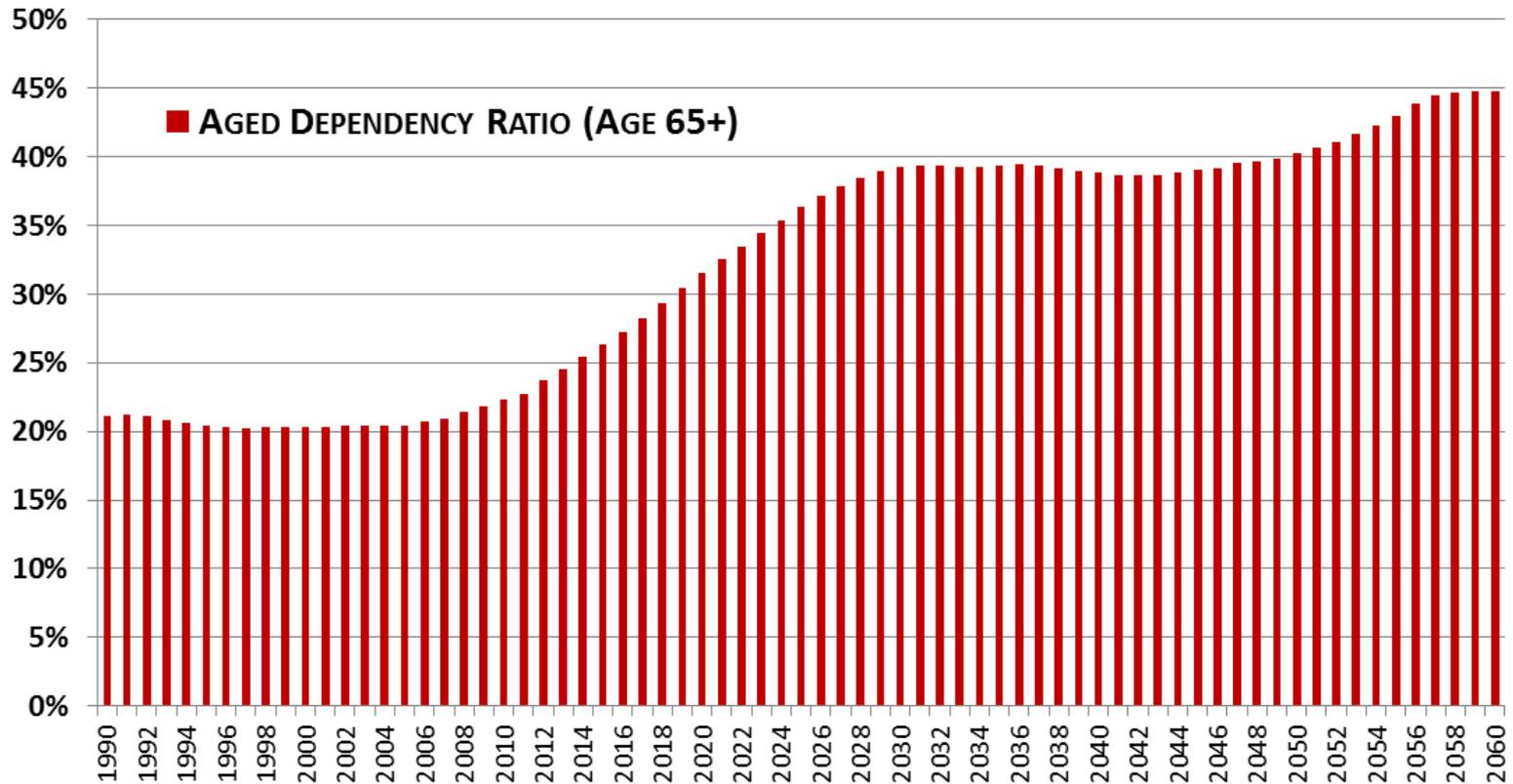
SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

DEPENDENCY RATIO - AGED

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MONTANA AGED DEPENDENCY RATIO

HISTORIC & PROJECTED , 1990 - 2060



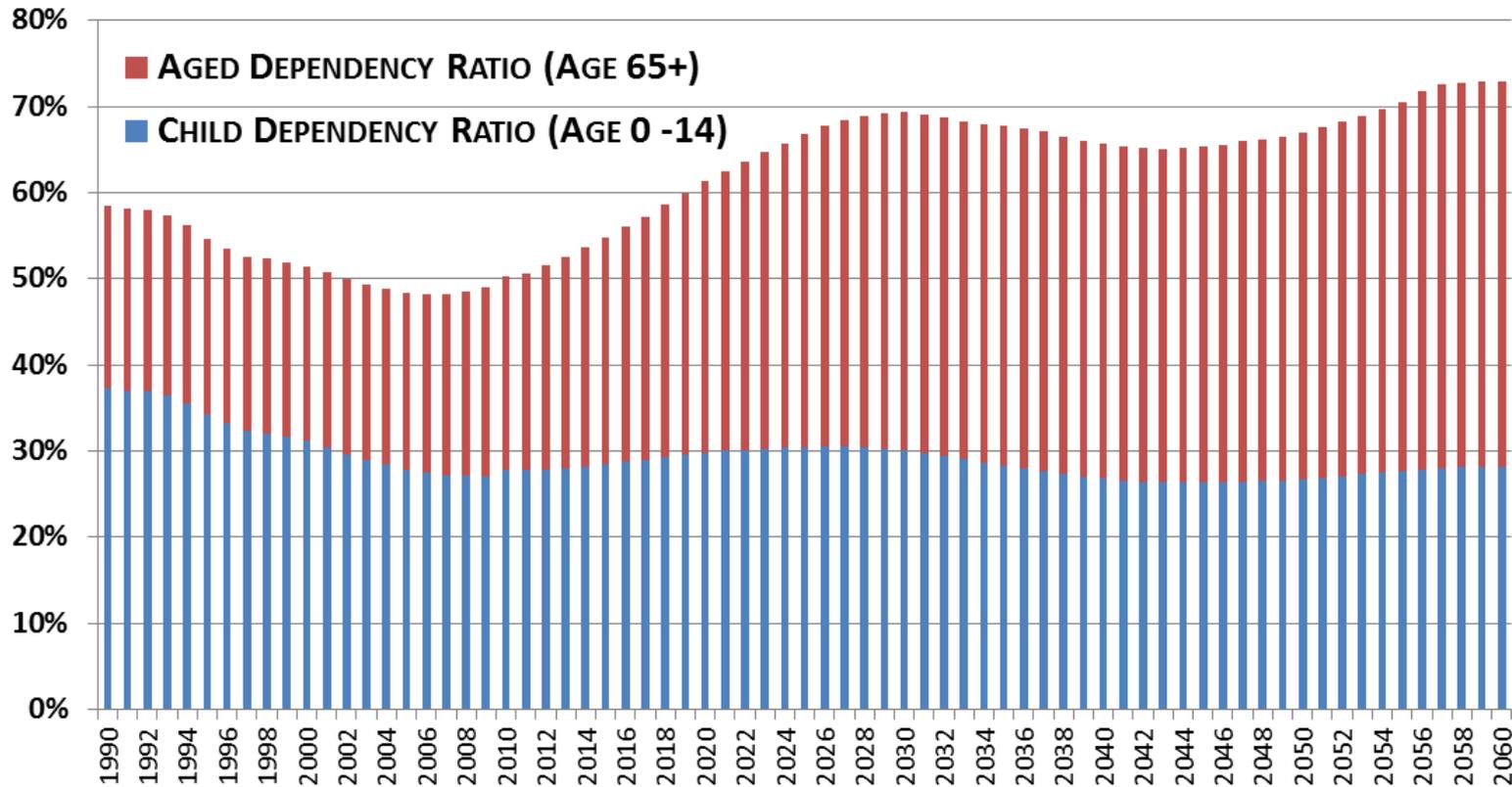
SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

DEPENDENCY RATIO - TOTAL

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MONTANA DEPENDENCY RATIO BY PART

HISTORIC & PROJECTED, 1990 - 2060

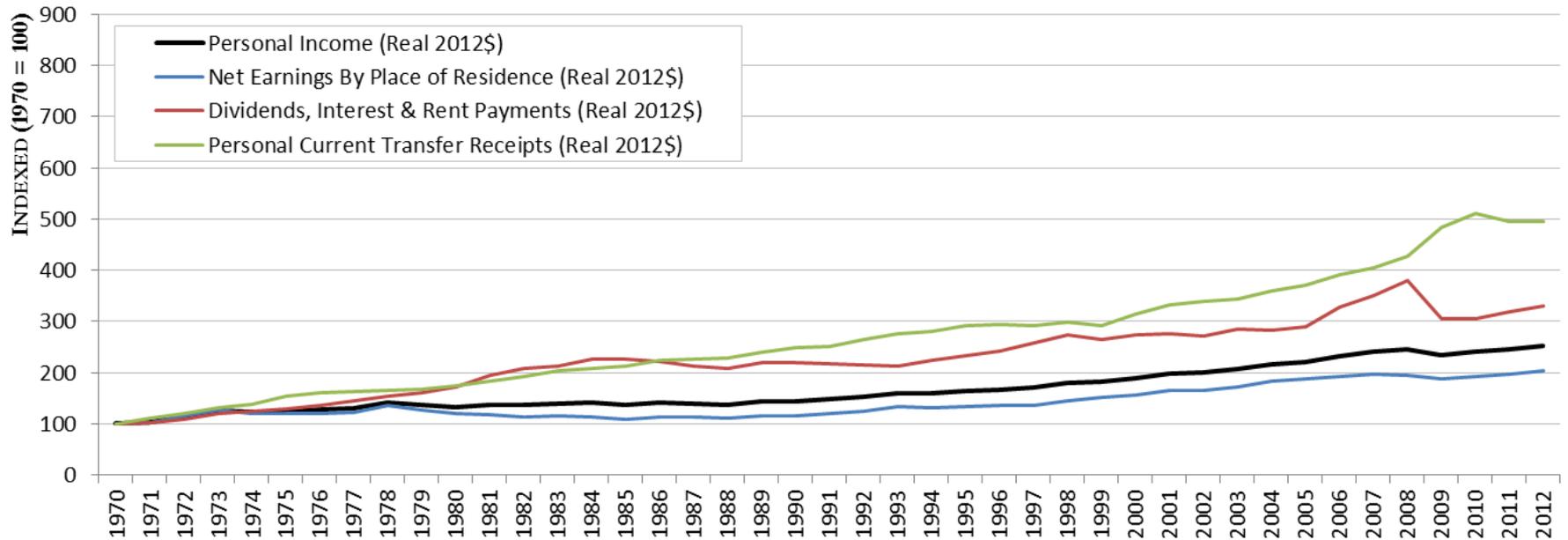


SOURCE: EREMI - A PRODUCT OF REGIONAL MODELS, INC. - RELEASED APRIL 2013

PERSONAL INCOME

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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

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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.

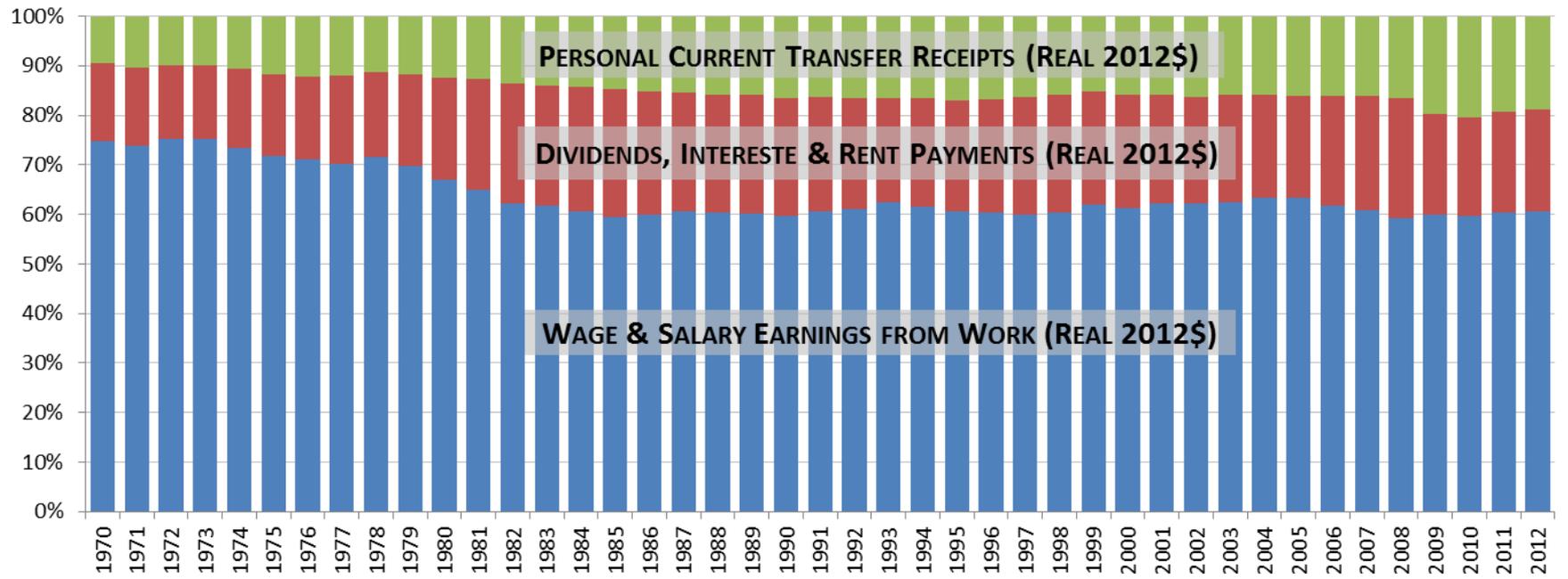
3. **PERSONAL CURRENT TRANSFER RECEIPTS**

- 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

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.

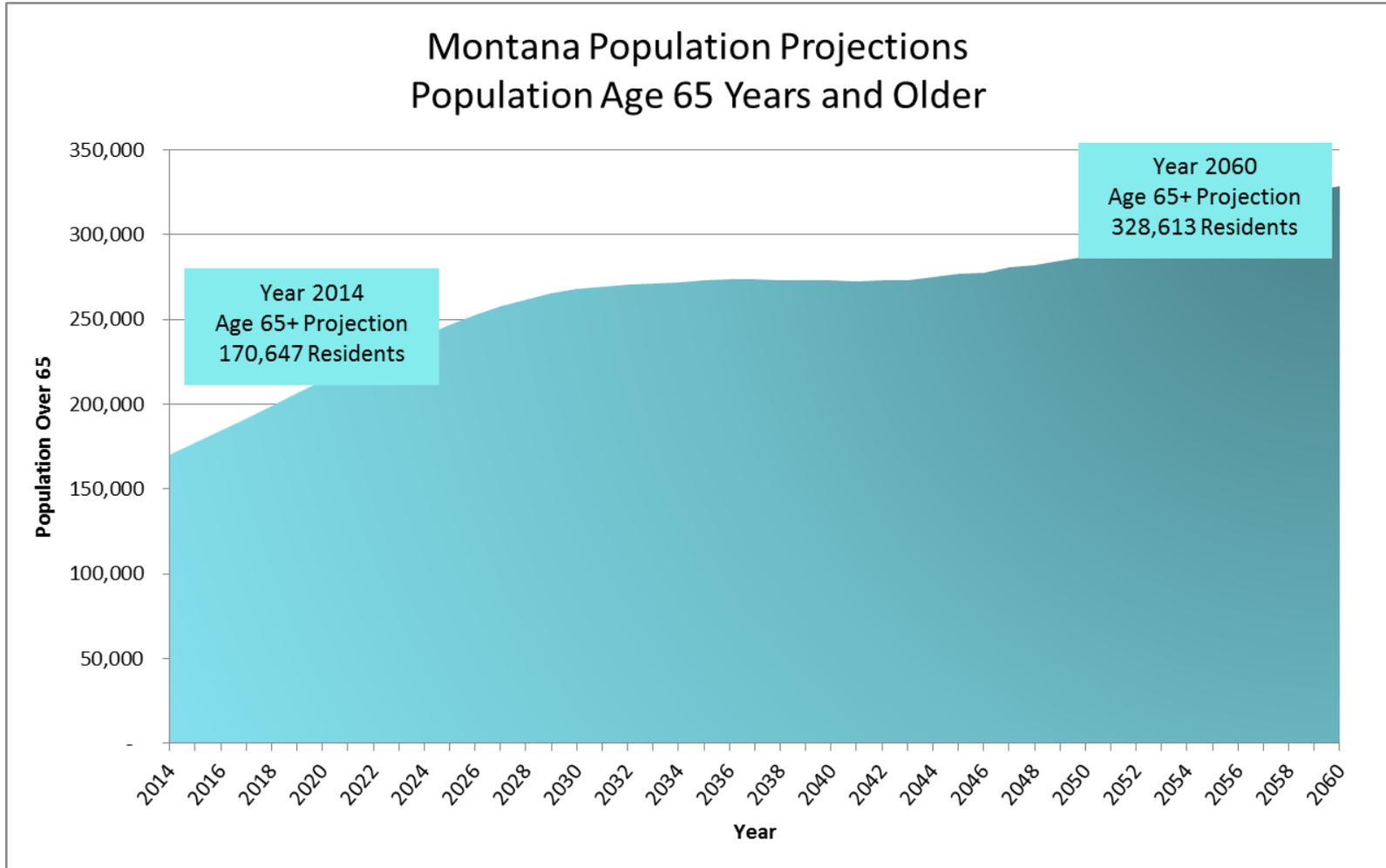
A FEW IMPORTANT TRENDS FOR COMMUNITY PLANNING

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AGING AND INCOME

OVER 65 PROJECTIONS

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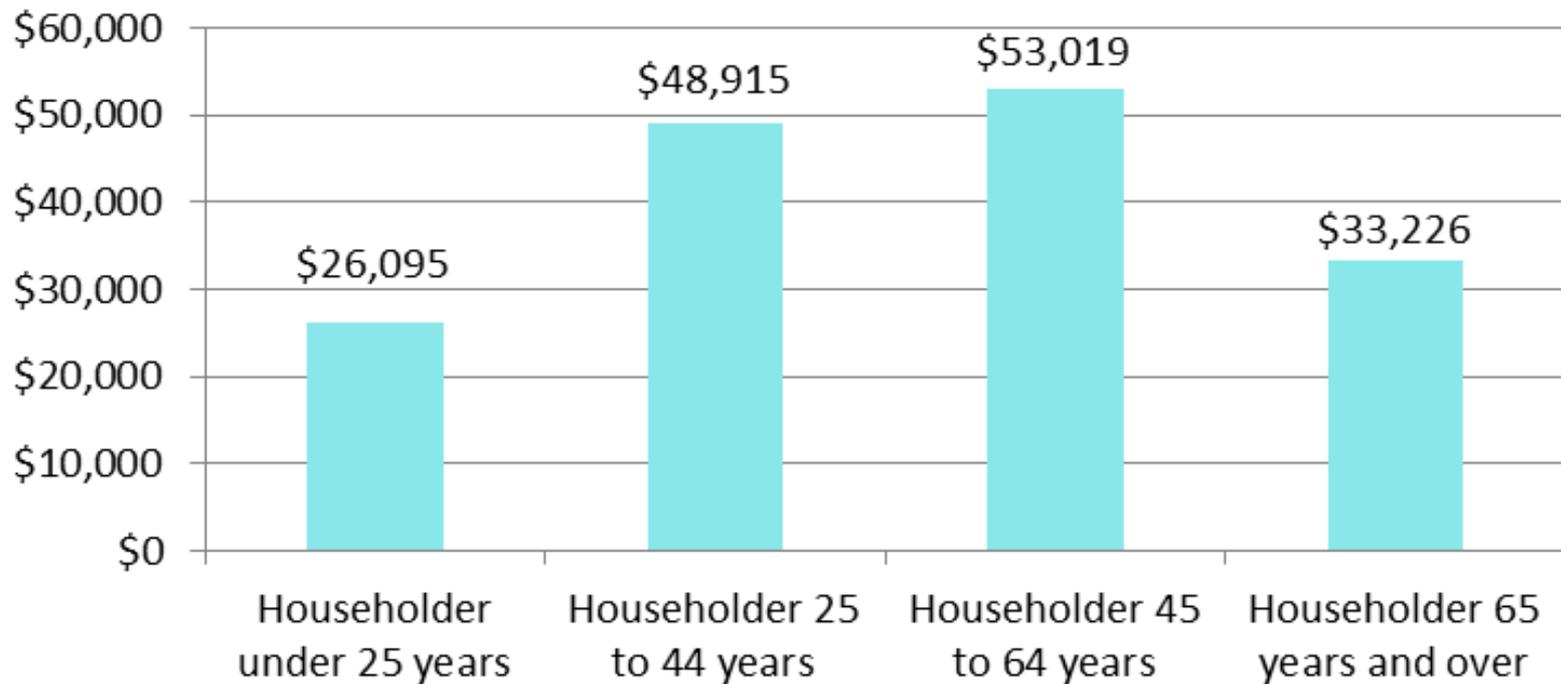


MONTANA MEDIAN HOUSEHOLD INCOME

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Montana Estimated Median Household Income (in 2011 inflation-adjusted dollars)

Source US Census Bureau 2009-2011 3-Year ACS



IRS STUDY – TAX BURDEN BY AGE GROUPS

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Table 2. Total Income Tax Liability by Age Group: 2009

	Number of Returns with Tax Liability	Amount Paid (Billions)	Share of Total Taxes Paid	Non-Payers	Percent of Age Group Non-Payers
All returns	90,660,104	\$1,032	100%	51,790,465	36%
Under 18	759,997	\$1	0%	1,948,158	72%
18 under 26	11,093,216	\$20	2%	12,078,565	52%
26 under 35	13,824,211	\$91	9%	10,280,037	43%
35 under 45	16,606,019	\$212	21%	9,913,683	37%
45 under 55	19,249,488	\$303	29%	7,022,848	27%
55 under 65	15,598,055	\$242	23%	4,074,779	21%
65 and over	13,529,118	\$162	16%	6,472,394	32%

<http://www.irs.gov/pub/irs-soi/08in37ag.xls>

IMPLICATIONS

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Project 2030 Montana's Aging Population

Department of Agricultural Economics and Economics

Montana State University

George Haynes, Myles Watts, Doug Young

*“RISING EXPENDITURES FOR THE ELDERLY ARE MOSTLY PAID BY STATE
RATHER THAN LOCAL FUNDS”*

- SEQUESTRATION?
- FEDERAL PROGRAM CUTS?

A FEW IMPORTANT TRENDS FOR COMMUNITY PLANNING

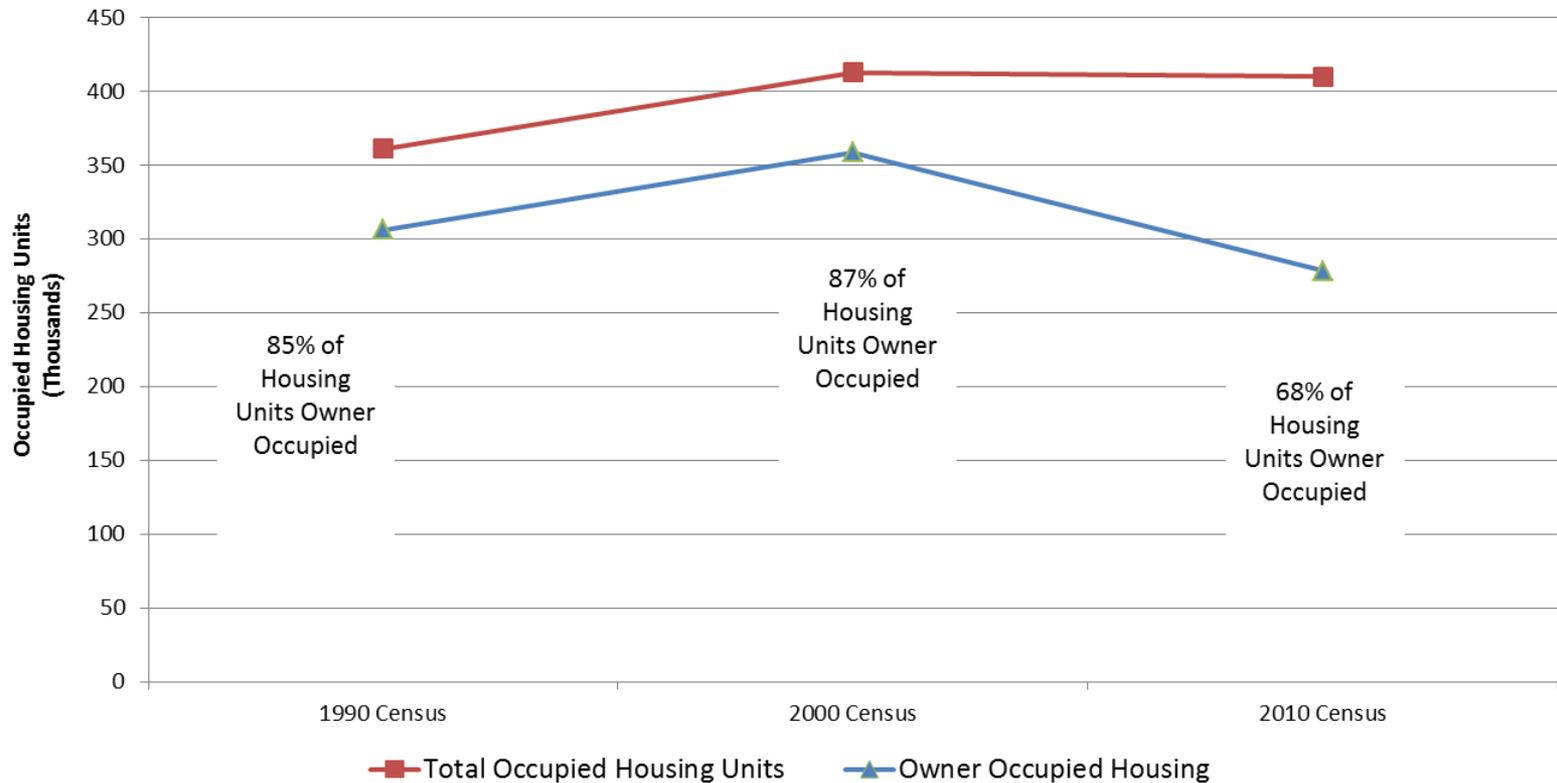
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HOME OWNERSHIP & VALUES

OWNER-OCCUPIED HOUSING

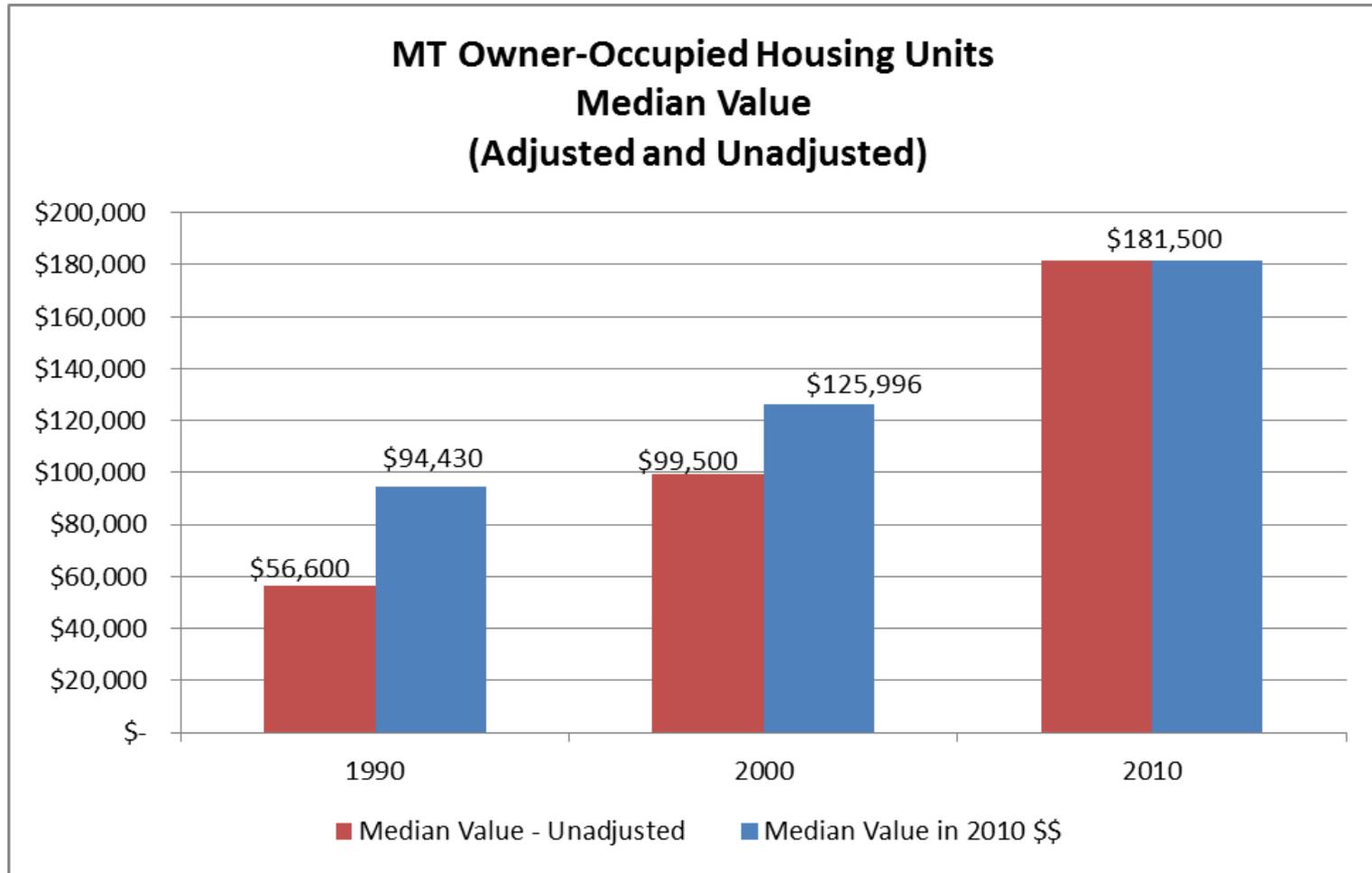
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MT Total Occupied Housing Compared to Owner Occupied Housing



OWNER-OCCUPIED HOUSING

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PROPERTY TAXABLE VALUES

HB 658 Taxable Valuation Rates for Class 3, 4, and 10 Property, and Class 4 Residential and Commercial Exemption Percentages

Tax Year	Class 3 & 4 Tax Rate	Class 4 Exemption Percentages		Class 10 Tax Rate
		Residential	Commercial	
2008	3.01%	34.0%	15.0%	0.35%
2009	2.93%	36.8%	14.2%	0.34%
2010	2.82%	39.5%	15.9%	0.33%
2011	2.72%	41.8%	17.5%	0.32%
2012	2.63%	44.0%	19.0%	0.31%
2013	2.54%	45.5%	20.3%	0.30%
2014	2.47%	47.0%	21.5%	0.29%

IMPLICATIONS

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Project 2030 Montana's Aging Population

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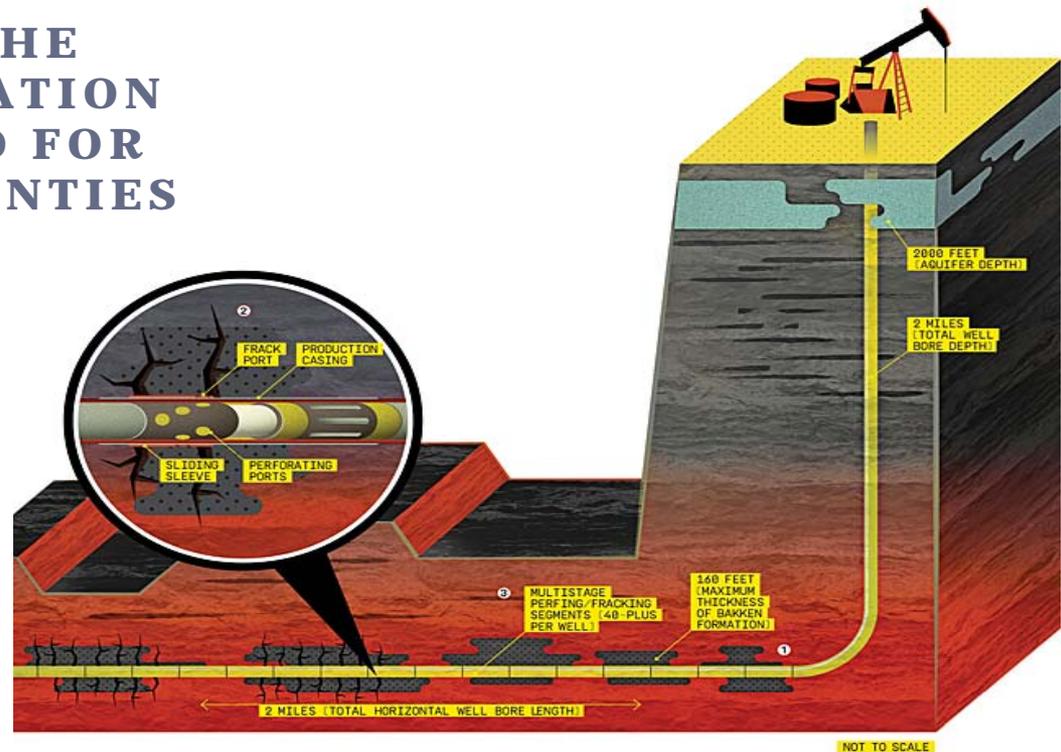
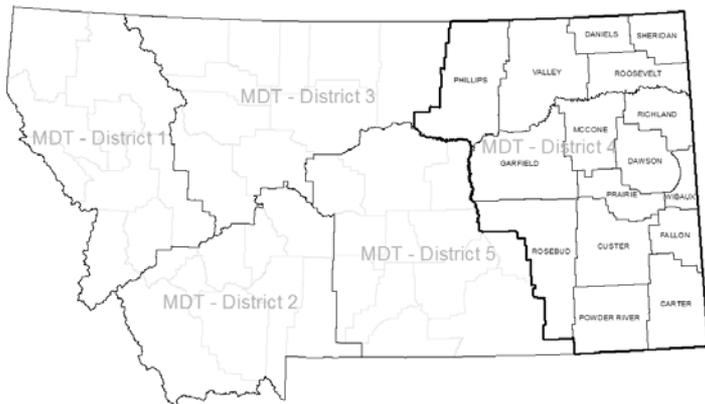
“WHILE AGEING MAY REDUCE INCOME TAX REVENUES, THESE DECLINES ARE LIKELY TO BE OFFSET BY INCREASED RESIDENTIAL PROPERTY TAXES”

- 2014 REAPPRAISAL AND MITIGATING LEGISLATION?

EASTERN MONTANA SUPPLEMENTAL POPULATION PROJECTIONS

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A QUICK PLUG FOR THE SUPPLEMENTAL POPULATION PROJECTIONS CEIC DID FOR EASTERN MONTANA COUNTIES



SUPPLEMENTAL EASTERN MT POPULATION PROJECTIONS

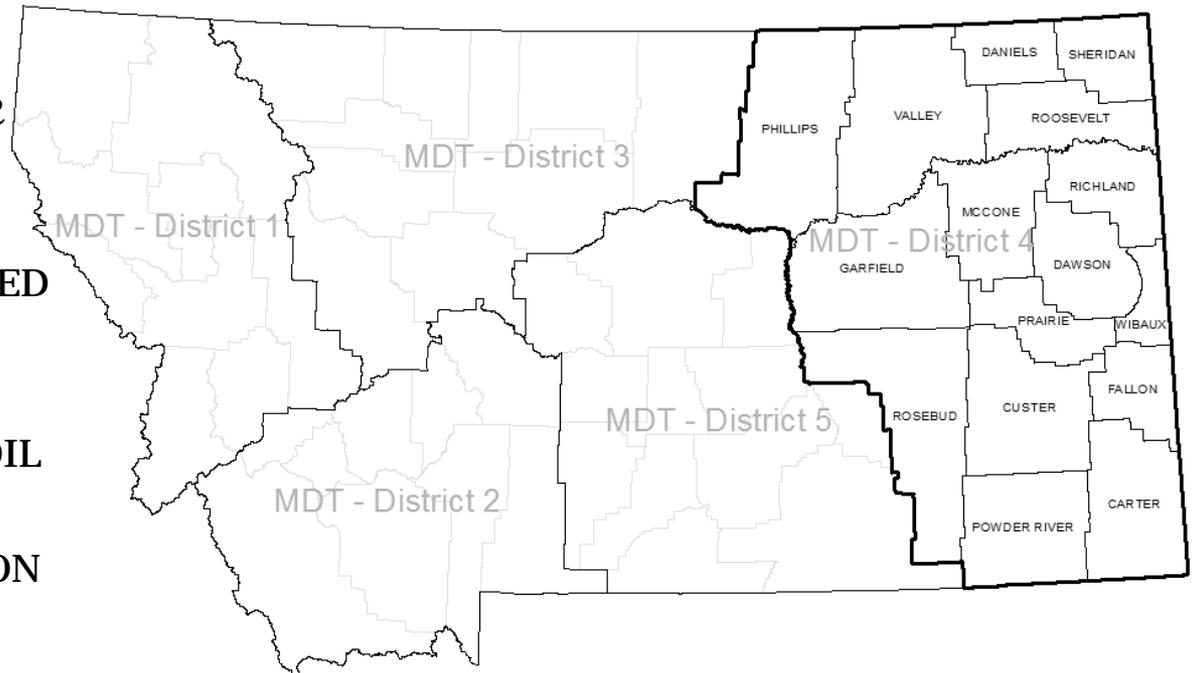
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MDT'S PLANNING DISTRICT 4 IS
GEOGRAPHICALLY EQUAL TO
"THE REGION"

THE MONTANA DEPARTMENT OF
TRANSPORTATION (MDT),
PLANNING DIVISION HAS A 5-
REGION REMI PI+ MODEL FOR
THE STATE OF MONTANA...

MDT LOOKED AT THE ESTIMATED
IMPACTS TO MT
TRANSPORTATION
INFRASTRUCTURE **IF** FUTURE OIL
DEVELOPMENT INCREASED TO
VARYING LEVELS OF PRODUCTION
IN EASTERN MONTANA.



SUPPLEMENTAL EASTERN MT POPULATION PROJECTIONS

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IN SHORT, MDT ESTIMATED 4 SCENARIOS OF HOW FUTURE OIL DEVELOPMENT **MAY LOOK** IN EASTERN MONTANA AND USED THEIR PI+ MODEL TO ESTIMATE THE IMPACTS FOR THE EASTERN MONTANA REGION – MOSTLY CONCERNED WITH TRANSPORTATION INFRASTRUCTURE.

WE THEN TOOK MDT'S PROJECTED TOTAL POPULATION FOR THE REGION AND USED EREMI TO ALLOCATE THE GROWTH TO THE RESPECTIVE 16 COUNTIES WITHIN IT.

NOTE – THESE FIGURES ESTIMATE **RESIDENT** POPULATION ONLY...
NON-RESIDENTS – MIGRANT WORKERS – ARE NOT INCLUDED IN THESE FIGURES



MONTANA COUNTY POPULATION PROJECTIONS AVAILABLE AT: <http://ceic.mt.gov/Population/PopProjectionsTitlePage.aspx>

Census & Economic Information Center

Montana State & County Population Projections - Home Page

County level population projections provided by the Census & Economic Information Center (CEIC) are a product of [Regional Economic Models, Inc. \(REMI\)](#) known as eREMI.



Based on the trusted REMI methodology that has been used by clients throughout the nation and the world for over thirty years, eREMI provides complete demographic forecasts through 2060 for Montana and the State's 56 counties.

Montana Population Projections, 1990 - 2060

Historic Estimates for 1990 - 2010; Projected Figures for 2011 - 2060
Released - April 2013

NOTE: Figures provided may not sum to the totals due to rounding during the estimation process.

[Montana State Totals & County Comparisons](#)

[Montana County Total Population by Gender & Age Group, 1990 - 2060](#)

With the development of the Bakken oil play in eastern Montana and western North Dakota, population change in the region is highly contingent on oil development and activities supporting the oil industry.

In an effort to account for potential effects increased oil development may have on the population in eastern Montana counties, CEIC has incorporated the work of the Montana Department of Transportation's (MDT) Planning Division related to impacts of future oil development on the defined 16 county region with eREMI baseline county level projections.

Please refer to the [Eastern Montana Population Projections - Methodology](#) for a detailed explanation of the process for allocating MDT's analysis on the entire region to each of the 16 counties within the region using eREMI county level population projections.

Eastern MT County Total Population Projections: 2012 - 2035

Released - April 2013

[Supplemental Eastern MT County Total Population Projections, 2012 - 2035](#)

DEPARTMENT OF COMMERCE

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Census & Economic Information Center

MT State & County Population Projections - Home Page

The eastern Montana county total population projections available on this page were estimated using the Montana Department of Transportation, Planning Divisions analysis related to the impacts of future oil development on the defined 16 county region in eastern Montana along with eREMI's baseline county level projections.

Please refer to the [Eastern Montana Population Projections - Methodology](#) for a detailed explanation of the process for allocating the results of MDT's analysis on the entire region to each of the 16 counties within the respective region.

Supplemental Eastern MT County Total Population Projections, 2012 - 2035
 Released - April 2013

Carter County	XLS	PDF	Phillips County	XLS	PDF
Custer County	XLS	PDF	Powder River County	XLS	PDF
Daniels County	XLS	PDF	Richland County	XLS	PDF
Dawson County	XLS	PDF	Rosebud County	XLS	PDF
Fallon County	XLS	PDF	Roosevelt County	XLS	PDF
Garfield County	XLS	PDF	Sheridan County	XLS	PDF
McCone County	XLS	PDF	Valley County	XLS	PDF
Prairie County	XLS	PDF	Wibaux County	XLS	PDF

QUESTIONS???

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