

Who Am I?



Edelmira Barreira Diz



Spain's Prime Minister Mariano Rajoy appointed Ms. Barreira as the country "Sex Tsar" on 1/27/17.



Spain's Education Minister states that the low birth rate "aggravates other economic imbalances".

Spain's Prime Minister has tasked Ms. Barreira with drafting a national strategy to address demographic imbalance.



- * Spain's birth rate has fallen 18% since 2008.
- * Spain's birth rate has been eclipsed by its death rate.
- * Between 1977 and 2015, the number of childless couples has tripled from 1.5 Million to 4.4 Million.

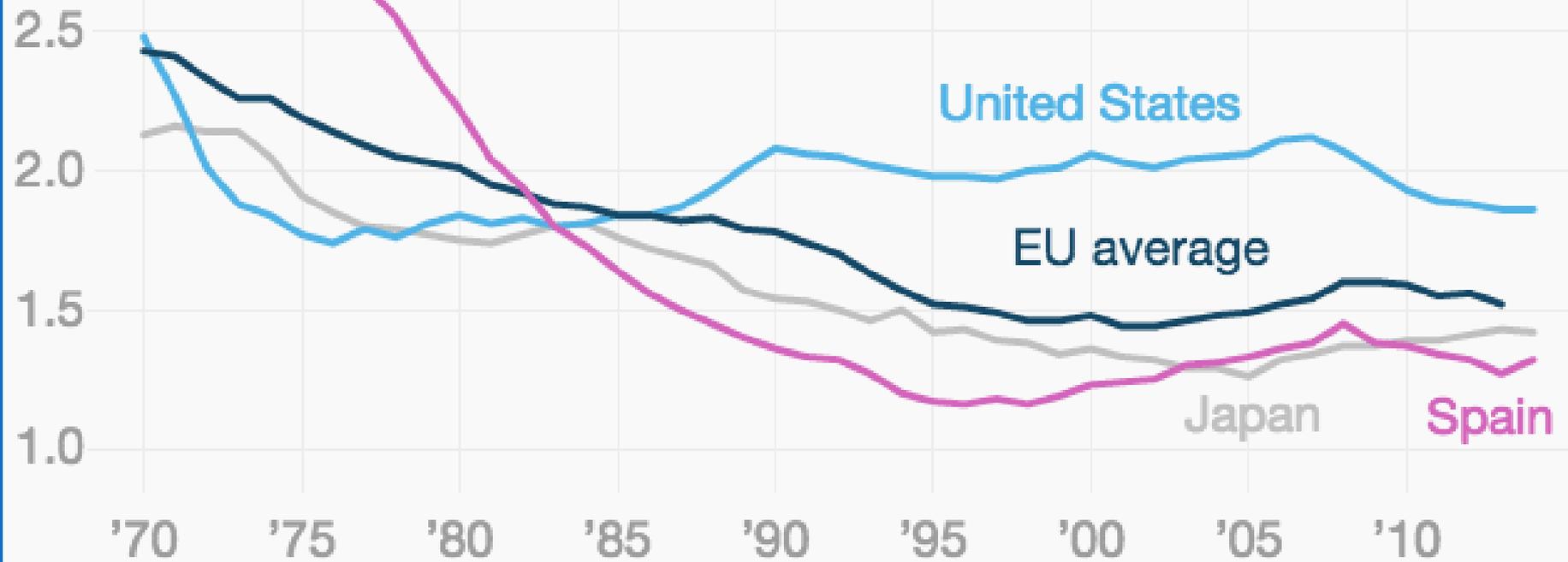


“We are in a demographic winter.”

Spain's Fertility Rate = 1.3

Average fertility rates

3.0 children per woman





Is Spain not your
ultimate destination?
**What about
Italy!**



Mayor Galliano of Bormida, Italy is offering \$2,000-euros to anyone willing to relocate to this quaint northwestern Italian village (population is 349).



Published:
May 8, 2017

Takers?

Gina McCarty

Former USEPA Administrator

- **Sustainability:**
 - “We have to be **wicked smart** about how we innovate to improve the long term **sustainability** and health of water.”

USEPA's Version of the Vision

This is right off the: “Smart Growth in Small Towns and Rural Communities” resources website. A document entitled:

- **Framework for Creating a Smart Growth Economic Development Strategy.**
 - Step-by-step guide to building a place-based economic development strategy. It is intended for small and mid-sized cities, particularly those that have limited population growth, areas of disinvestment, and/or a struggling economy.

A Proposed Vision for USEPA

This is right off the: “Smart Growth in Small Towns and Rural Communities” resources website. A document entitled:

- Framework for Smart Growth Economic Development
- Step-by-step guide to building a place-based economic development strategy. It is intended for small and mid-sized cities, particularly those that have a **declining population, under-funded infrastructures, limited population growth**, areas of disinvestment, and/or a struggling economy.

Here's A New Approach

In My View

- **Sustainability:**

- In order to talk about sustainability, the conversation must return to the “cornerstone” in the pile of building blocks.

- **Population Demographics**

- My college geography degree is finally paying off... after 30 years.

Global AgeWatch Index 2015

Insight Report

- **I'm getting older...what about you?**
 - **Report compares the living conditions for people aged 60 and older in 96 countries.**
 - **Global population is aging resulting from lower birth rates and people living longer.**
 - **“However, not all governments have put policies in place to respond to the challenges posed by an aging population”.**

Global AgeWatch Index 2015

Insight Report

- Imagine the political decisions that must take place in these two countries.

Percentage of population over 60:

China:

2015 = 15.2%

2030 = 25.3%

2050 = 36.5%

Greece:

2015 = 27.0%

2030 = 33.2%

2050 = 40.8%

Global AgeWatch Index 2015

Insight Report

- What if older-aged poverty rates remain the same as the population continues to age?

Percentage of population over 60:

UK:

2015 = 23.0%

2030 = 27.8%

2050 = 30.7%

Older-Age

Poverty = 9.3%

USA:

2015 = 20.7%

2030 = 26.1%

2050 = 27.9%

Older-Age

Poverty = 18.8%

U.S. Population Demographic Definitions

- **Shrinking City:** Any city that has lost population over one U.S. Census cycle.
- **Legacy City:** One of 18 “central cities” that had a minimum population of 50,000 people that has suffered 20% population loss from its peak, including:

Akron, Baltimore, Birmingham, Buffalo, Camden, Canton, Cincinnati, Cleveland, Dayton, Detroit, **Flint**, Milwaukee, Newark, Philadelphia, Pittsburg, St. Louis, Syracuse, & Youngstown.

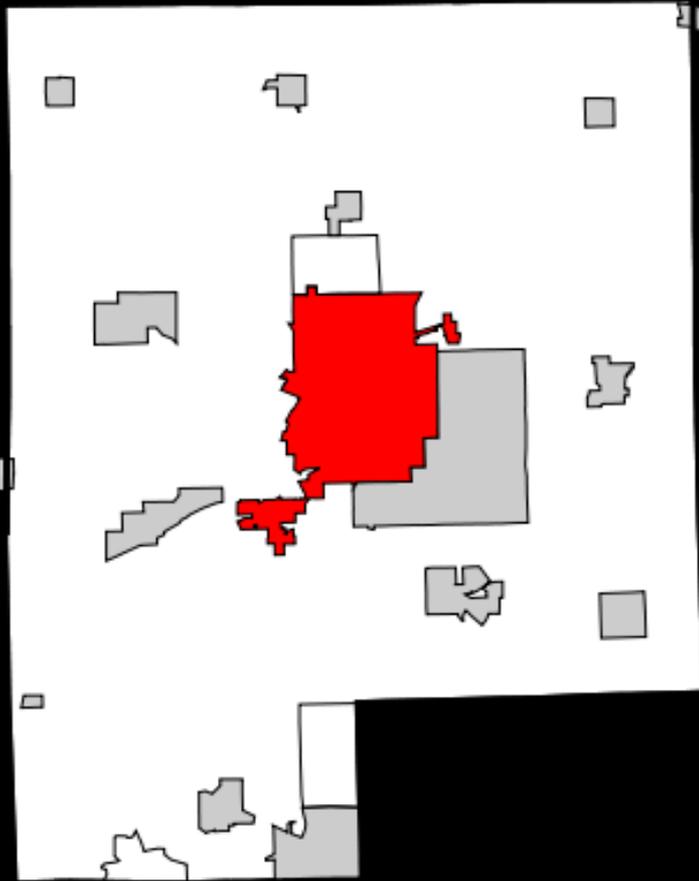
More Population Demographic Definitions

Legacy City: One of 18 U.S. central cities that had a minimum population of 50,000 people that has suffered 20% population loss from its peak, including:

Akron, Baltimore, Birmingham, Buffalo, Camden, Canton, Cincinnati, Cleveland, Dayton, Detroit, **Flint**, Milwaukee, Newark, Philadelphia, Pittsburg, St. Louis, Syracuse, & Youngstown.

* Legacy City: One of 41 cities that had a minimum population of 100,000 people that has suffered a 20% population loss since 1950.

City of Flint, County of Genesee, Michigan



Source: U.S. Census

In Flint, we went from this beautiful mall



Genesee County
Mall in 1970

...to these abandoned houses in 50 years.





There were 46,000
manufacturing workers
in Flint 20 years ago.

Today there are 12,400.

Flint, Michigan

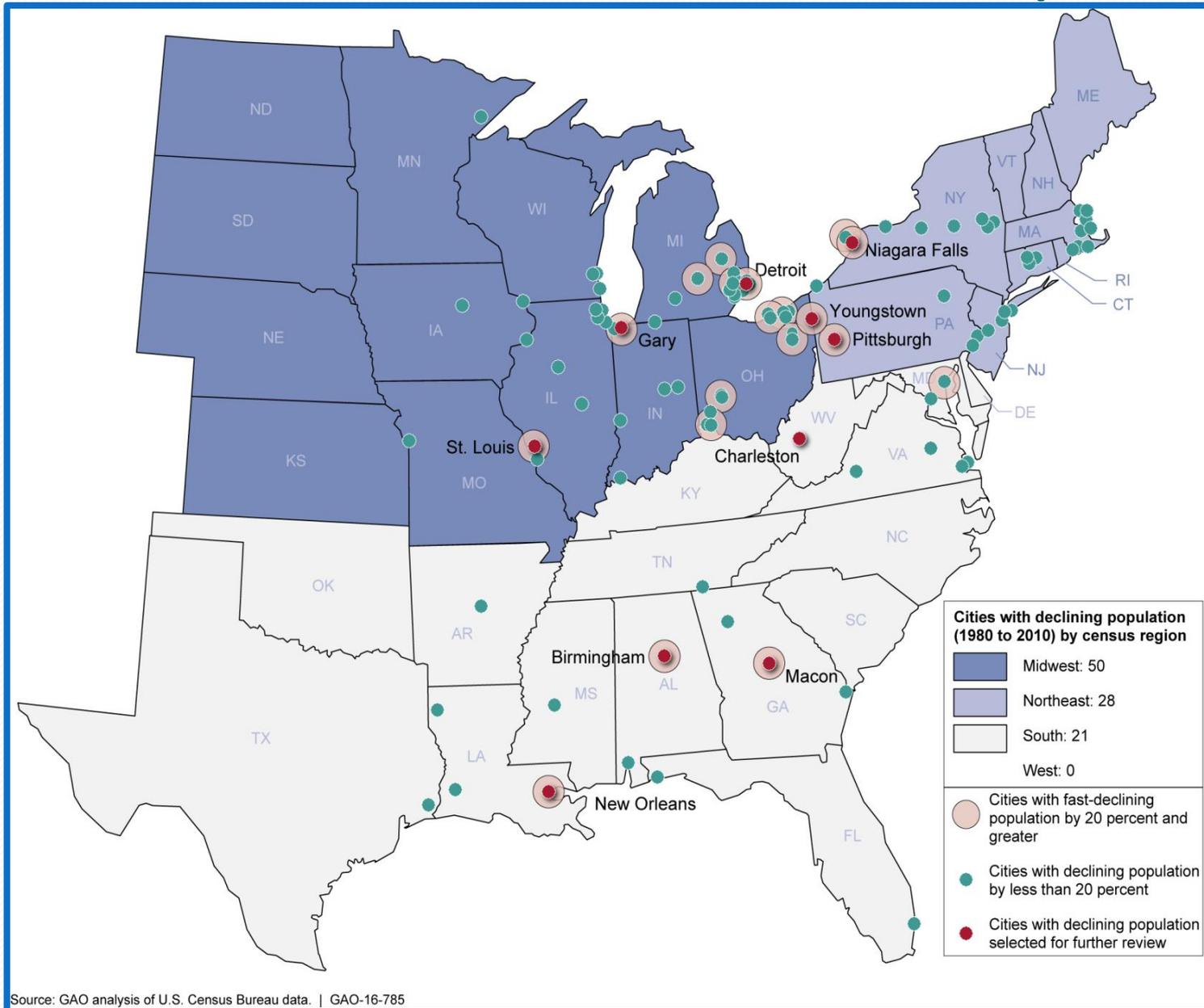
- There were political and financial decisions that had to be made in Flint as a result of this demographic fact:
- Peak population was 1960 = 196,940
- Population in 2010 = 102,434
- Decline in population from peak = **94,506**
- Population decline from peak = **48%**

U.S. Government Accountability Office

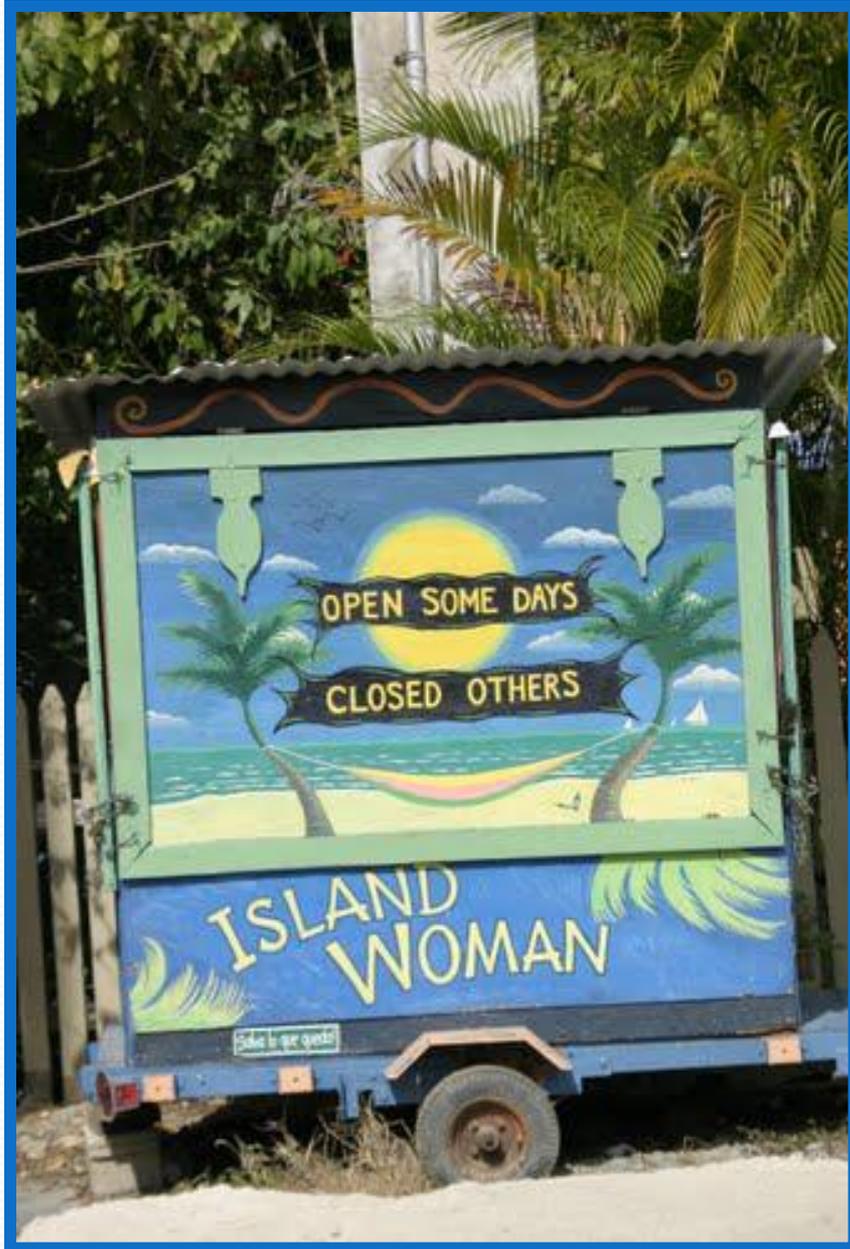
Report: **Water Infrastructure** (9/16)

Locality	Population Decline
● Gary, Indiana	- 47.2 %
● Youngstown, Ohio	- 42.0 %
● Detroit, Michigan	- 40.7 %
● New Orleans, Louisiana	- 38.3 %
● Niagara Falls, New York	- 29.7 %
● St. Louis, Missouri	- 29.5 %
● Pittsburgh, Pennsylvania	- 27.9 %
● Birmingham, Alabama	- 25.4 %
● Macon, Georgia	- 21.9 %
● Charleston, West Virginia	- 19.6 %

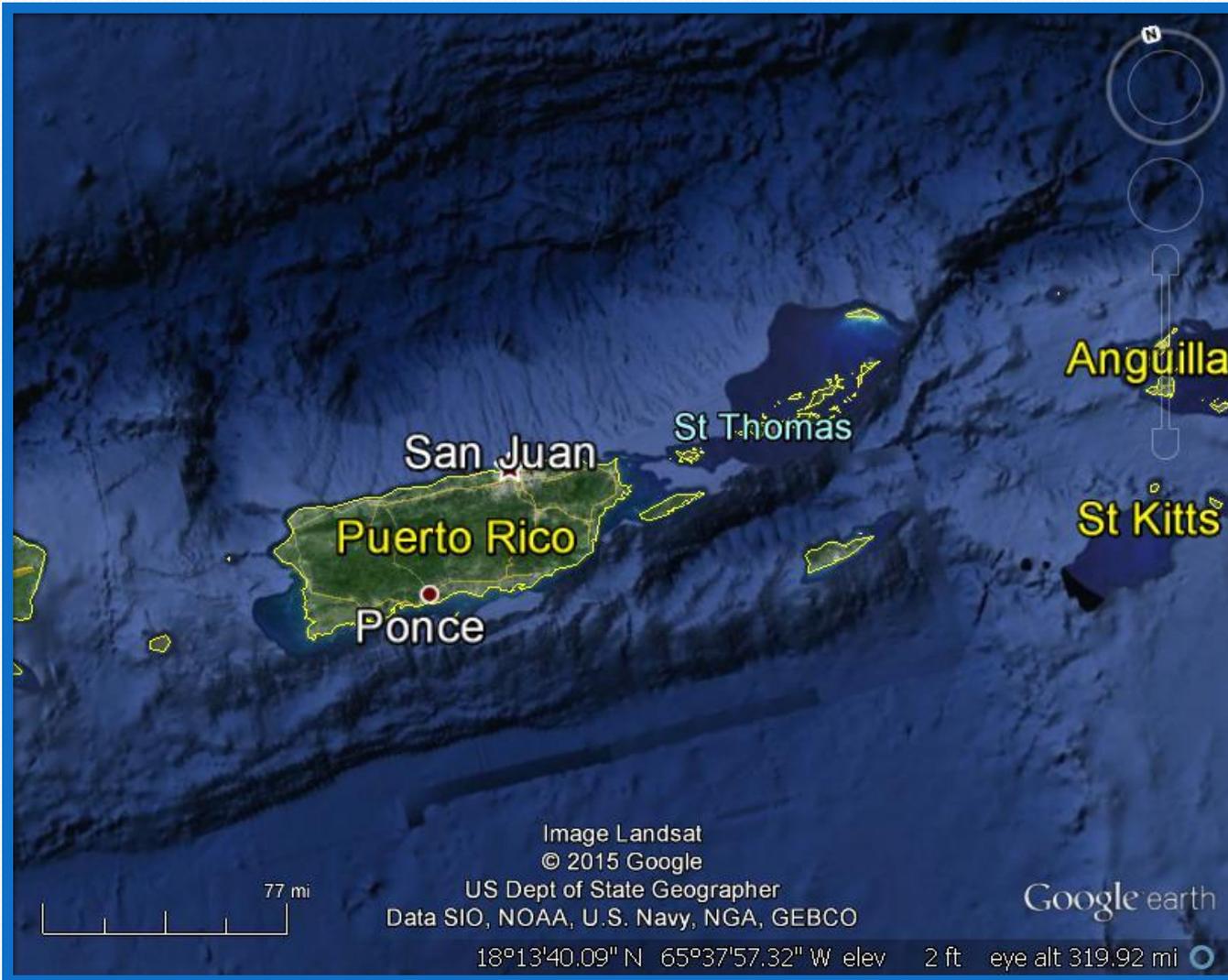
US GAO: Water Infrastructure Report (Page 18)



You can tell I work
in a basement.



Why Should You Care About Demographics?



A Botched Projection

- The Commonwealth of Puerto Rico was projected to grow by 87% from 2000 to 2030.
What happened?



- **Actual Population**

- 2000 = 3.808 Million
- 2010 = 3.700 Million
- 2013 = 3.615 Million
- 2014 = 3.548 Million

Projected Population

- 2000 = 3.8 Million
- 2030 = 6.7 Million

A Botched Projection

- Puerto Rico was projected to **grow** 87% from 2000 to 2030.



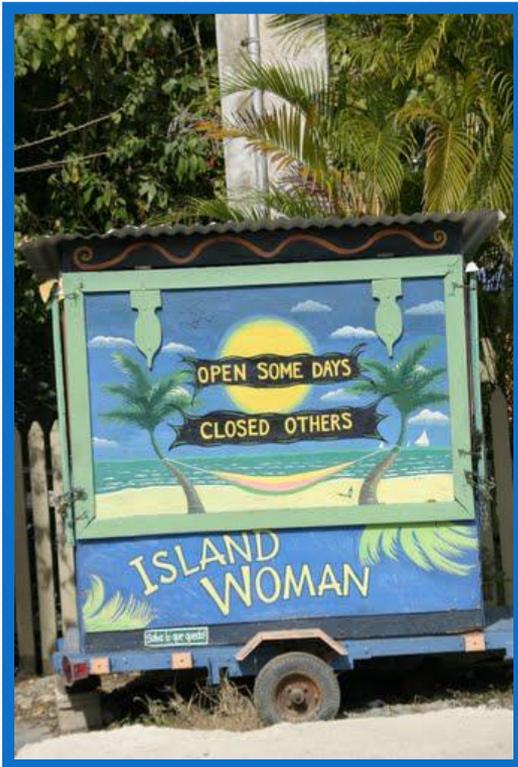
- The island's population **shrank** 6.8% in the first 14 years of the projection period. The newest "projection" has PR **losing** an additional 150,000 people in the next 16 years creating an overall **decline** of 11% over the 30-year period.
- The latest population "guestimate" shows PR at 3.0 Million people in 2050....**a loss of 21%.**

Imagine....



...running a municipal utility with a Mission Statement that reads:

- ↓ The power is on some days...off others.
- ↓ The water is on some days...off others.
- ↓ You can flush some days...not others.

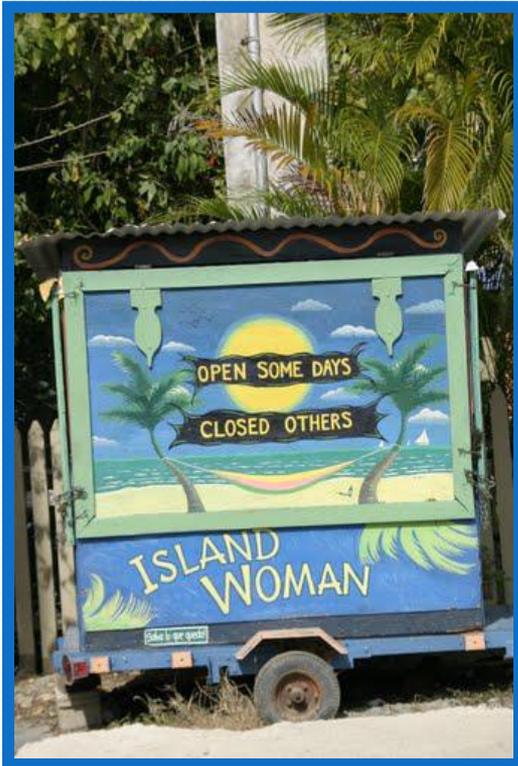


Imagine....



...running a municipal utility when the customers move away. How do you:

- ↓ Keep up with O&M.
- ↓ Retain qualified staff.
- ↓ Make system improvements.
- ↓ Comply with regulations.



Impact of Population Decline



- **Puerto Rico**

- Departure of younger population; leaving older, poorer population straining the govt. service sector.
- As of June 2015, only 40.1% of the population was active in the workforce (U.S. mainland was at 62.6%).
- “Informal economy” is expanding. New York Federal Reserve Bank has computed that 25% of the remaining population is now engaged in ‘informal economy’ avoiding taxes & costs of formal employment.

Efforts to Stave Off Disaster



- **Puerto Rico**

- With job base shrinking, sales & income taxes lost to the “informal economy”, PR government is trying desperately to finance its budget shortfalls with borrowed money, adding to the crushing debt load.
- Government is borrowing heavily in all sectors.
- The island’s \$72 Billion debt load has swollen borrowing from 60% of GPD in 2000 to 101% of GDP in 2013 **(PR’s debt is the size of New York’s with the population the size of Connecticut’s).**



Puerto Rico's story continues
in another venue...



Can Missouri Communities Succumb to the “Puerto Rico Effect”?

Headlines September 13, 2015

Big Spending has [REDACTED] in a Bind

“As [REDACTED] City Council members consider a drainage project and other unbudgeted expenses, the consequences of the City’s spending in the past year are becoming apparent.”... “The capital improvement fund already is expected to spend the next three years in the red, likely depleting much, if not all, of its \$1.7 Million cash reserve”.



USEPA's Small Community Challenges and Needs

- Limited financial resources
- Geographically dispersed populations
- Difficulty attracting, training, retaining system operators
- Limited managerial capacity
- Extreme topography and climate
- Geographic isolation

USEPA's Small Community Challenges and Needs

- Limited financial resources
- Geographically dispersed
- Difficulty attracting and retaining wastewater treatment plant operators
- Limited capacity
- Geographic isolation

What About Rural Shrinking and Legacy Cities?



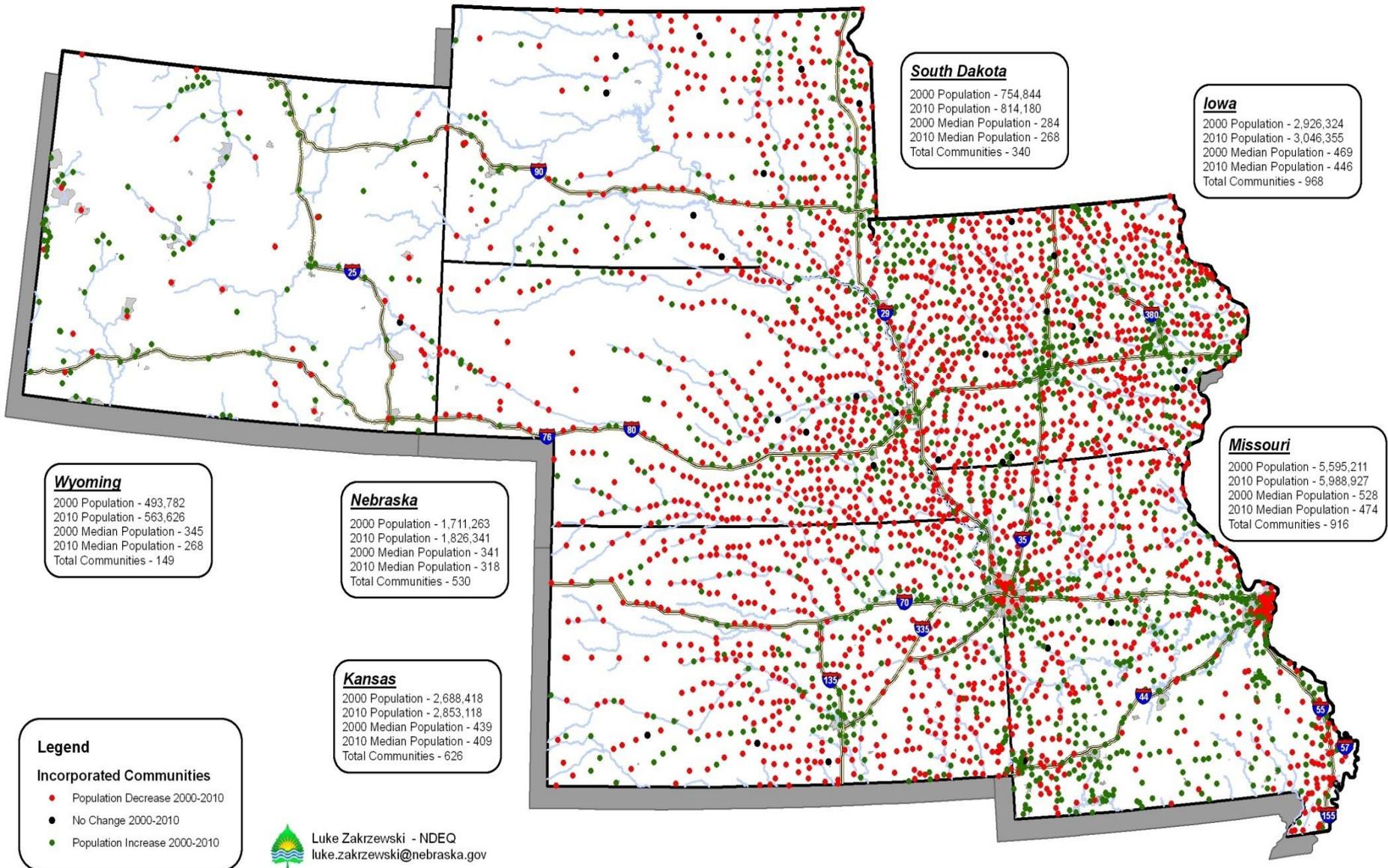
WICHITA STATE
UNIVERSITY

Missouri Rural Community Sustainability Assessment

Misty Bruckner

Environmental Finance Center
Hugo Wall School
Wichita State University

Population Change 2000 - 2010 Census



Wyoming
 2000 Population - 493,782
 2010 Population - 563,626
 2000 Median Population - 345
 2010 Median Population - 268
 Total Communities - 149

Nebraska
 2000 Population - 1,711,263
 2010 Population - 1,826,341
 2000 Median Population - 341
 2010 Median Population - 318
 Total Communities - 530

Kansas
 2000 Population - 2,688,418
 2010 Population - 2,853,118
 2000 Median Population - 439
 2010 Median Population - 409
 Total Communities - 626

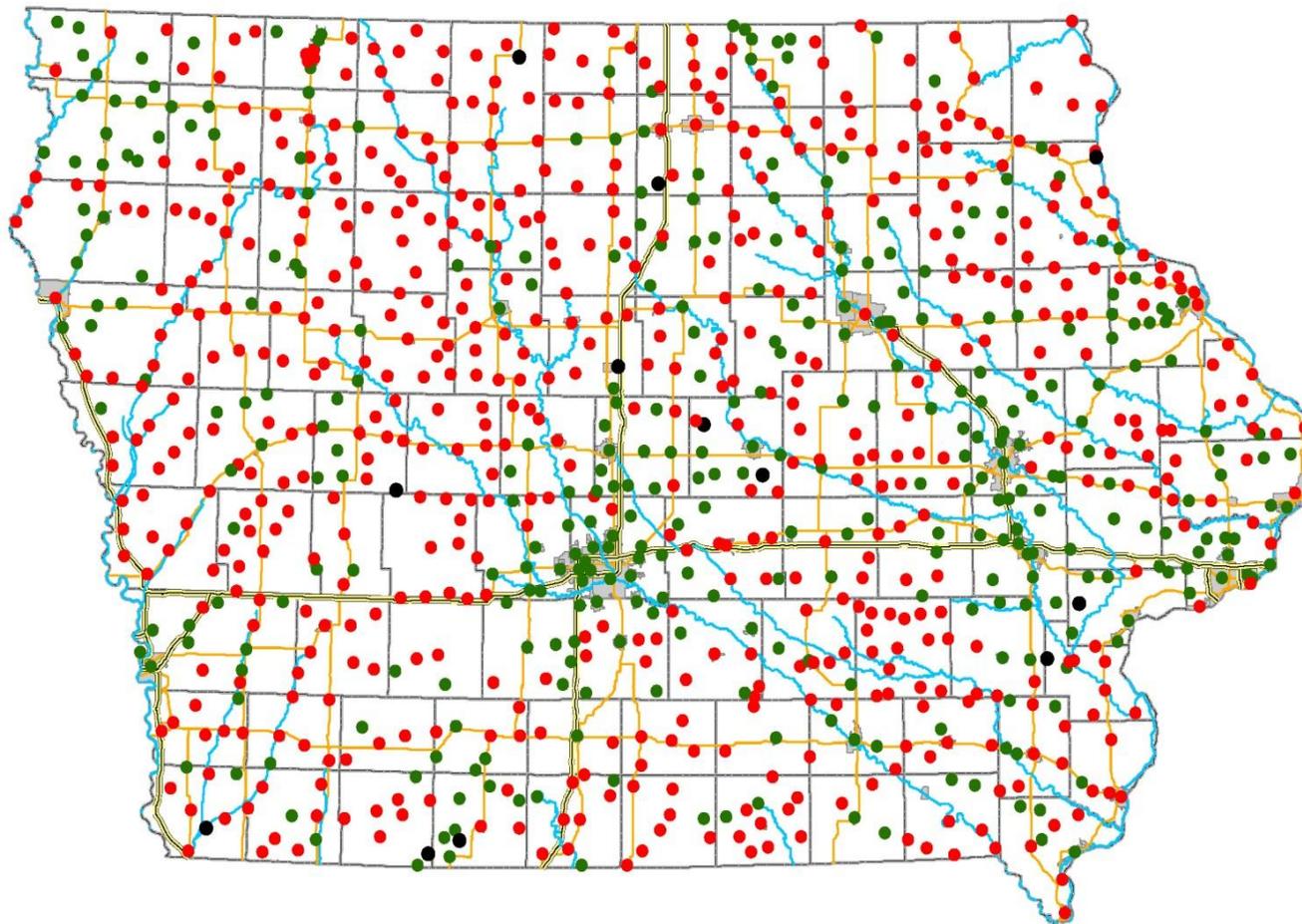
South Dakota
 2000 Population - 754,844
 2010 Population - 814,180
 2000 Median Population - 284
 2010 Median Population - 268
 Total Communities - 340

Iowa
 2000 Population - 2,926,324
 2010 Population - 3,046,355
 2000 Median Population - 469
 2010 Median Population - 446
 Total Communities - 968

Missouri
 2000 Population - 5,595,211
 2010 Population - 5,988,927
 2000 Median Population - 528
 2010 Median Population - 474
 Total Communities - 916

Legend
Incorporated Communities
 ● Population Decrease 2000-2010
 ● No Change 2000-2010
 ● Population Increase 2000-2010

Iowa Population Change 2000 - 2010 Census



# of People Change	Communities (Count)
>100	82
10 - 99	412
1 - 9	103
0	12
1 - 9	68
10 - 99	151
>100	140

Incorporated Communities

- Decreasing
- No Change
- Increasing

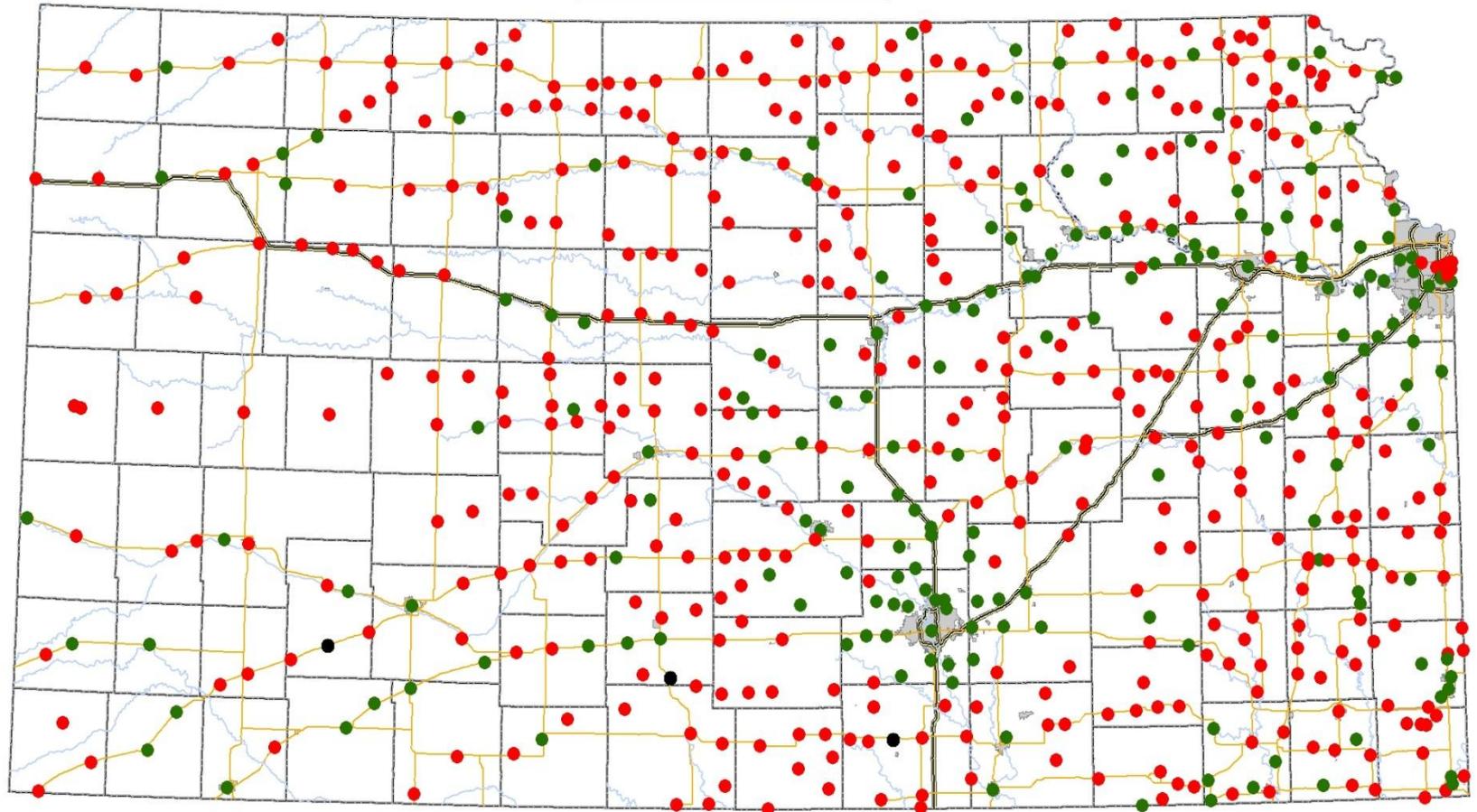
Iowa

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Luke Zakrzewski - NDEQ
 luke.zakrzewski@nebraska.gov

Kansas Population Change 2000 - 2010 Census



Incorporated Communities

- Decreasing
- No Change
- Increasing



Kansas

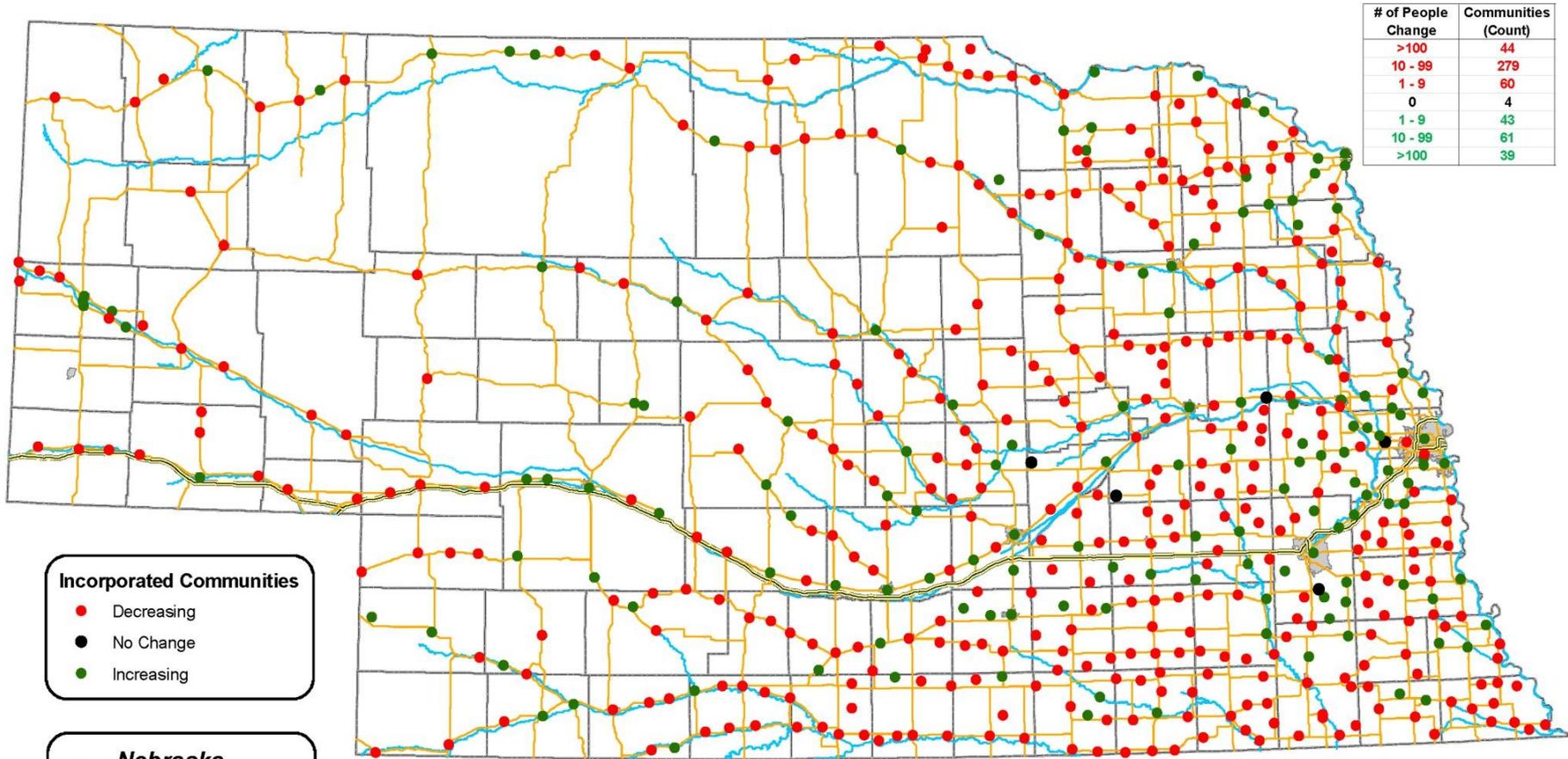
2000 Population - 2,688,418
 2010 Population - 2,853,118
 2000 Median Population - 439
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 Total Communities - 626

# of People Change	Communities (Count)
>100	82
10 - 99	289
1 - 9	57
0	4
1 - 9	34
10 - 99	71
>100	89



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Nebraska Population Change 2000 - 2010 Census



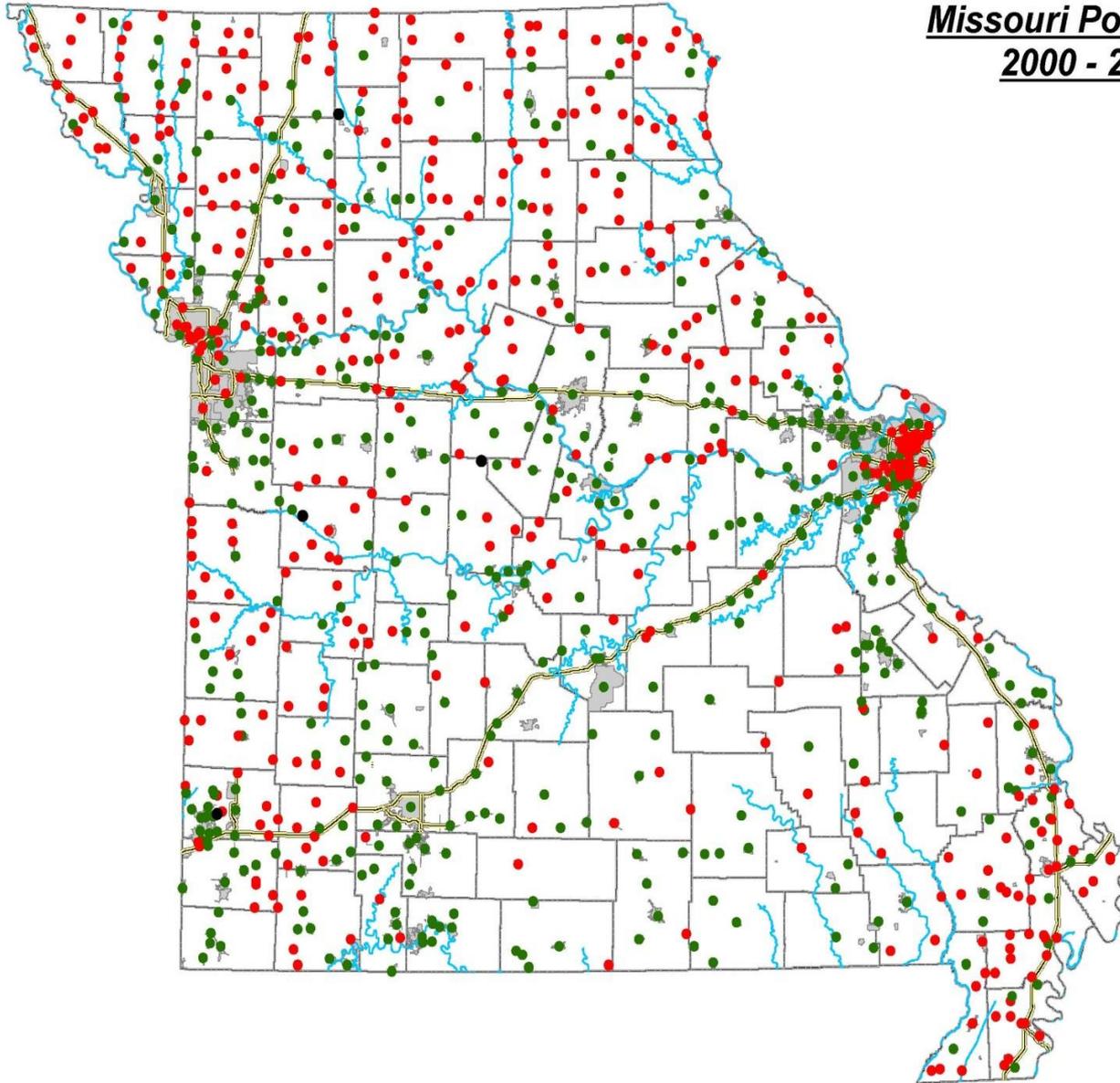
# of People Change	Communities (Count)
>100	44
10 - 99	279
1 - 9	60
0	4
1 - 9	43
10 - 99	61
>100	39

Incorporated Communities

- Decreasing
- No Change
- Increasing

Nebraska
 2000 Population - 1,711,263
 2010 Population - 1,826,341
 2000 Median Population - 341
 2010 Median Population - 318
 Total Communities - 530

Missouri Population Change 2000 - 2010 Census



# of People Change	Communities (Count)
>100	98
10 - 99	292
1 - 9	70
0	4
1 - 9	66
10 - 99	169
>100	217

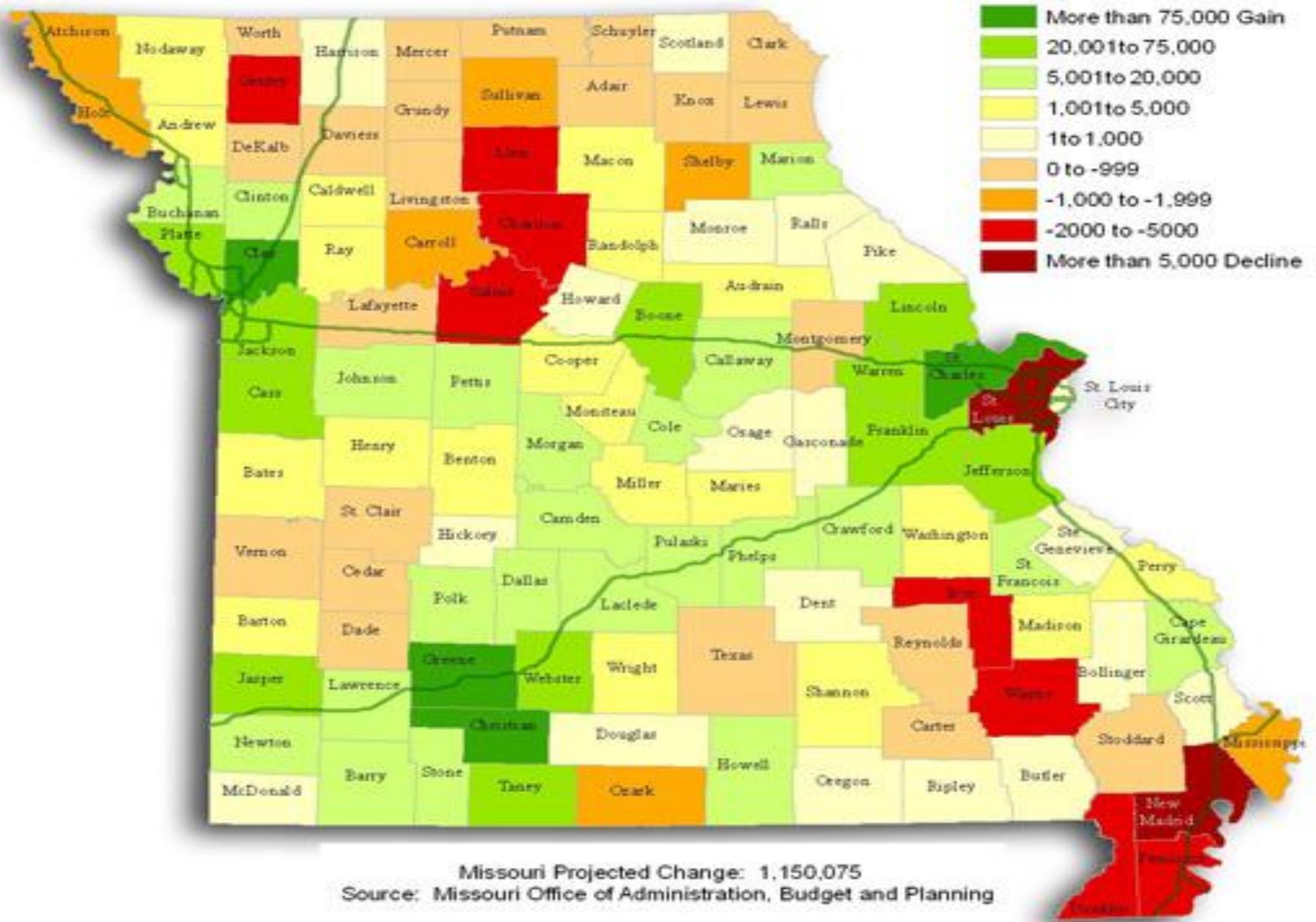
Incorporated Communities

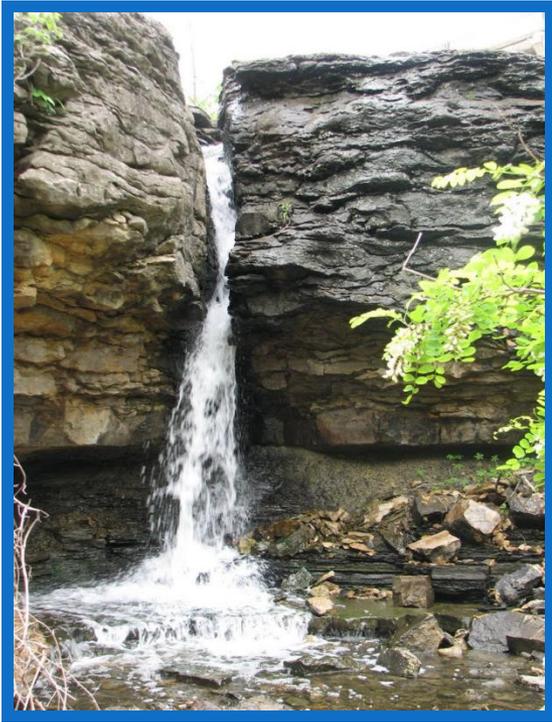
- Decreasing
- No Change
- Increasing

Missouri

2000 Population - 5,595,211
 2010 Population - 5,988,927
 2000 Median Population - 528
 2010 Median Population - 474
 Total Communities - 916

Projected Change in Population, 2000 to 2030





When are we going to have a concerted policy effort to plan to have **smaller cities...not just smaller legacy cities?**

Missouri County Projections (one view)

County	2000 (Year)	2030 (Year)	Loss Number	Loss (as a %)
St. Louis	1,016,300	956,817	-59,483	-5.9%
New Madrid	19,760	12,554	-7,206	-36.5%
Dunklin	33,155	28,765	-4,390	-13.2%
Pemiscot	20,047	16,447	-3,600	-18.0%
Iron	10,697	7,494	-3,203	-29.9%
Linn	13,754	10,696	-3,058	-22.2%
Saline	23,756	21,140	-2,616	-11.0%
Chariton	8,438	6,172	-2,266	-26.9%
Gentry	6,861	4,759	-2,102	-30.6%
Wayne	13,259	11,200	-2,059	-15.5%

Missouri County Projections (another view)

County	2000 (Year)	2030 (Year)	Loss Number	Loss (as a %)
New Madrid	19,760	12,554	-7,206	-36.5%
Gentry	6,861	4,759	-2,102	-30.6%
Iron	10,697	7,494	-3,203	-29.9%
Chariton	8,438	6,172	-2,266	-26.9%
Holt	5,351	4,094	-1,257	-23.5%
Worth	2,382	1,826	-556	-23.3%
Linn	13,754	10,696	-3,058	-22.2%
Sullivan	7,219	5,822	-1,397	-19.4%
Pemiscot	20,047	16,477	-3,600	-18.0%
Atchison	6,431	5,280	-1,151	-17.9%

USDA Rural Development Funding

- 2015:
 - 11 municipal projects were funded with some, or all, grant funding.
 - 8 of those 11 projects were in shrinking cities.

USDA Rural Development Funding

- 2016:
 - 23 municipal projects were funded with some, or all, grant funding.
 - 13 of those 23 projects were in shrinking cities.
 - 9 municipalities had shrinkage was over a 40 - 50 year period and in excess of 15% from their peaks.

2016 MPUA Rate Survey Highlights

Community Size Grouping (Population)	Number of Communities in Size Group	Communities with Population Decrease	Communities with Population Decrease (as a %)
100 - 999	489	308	63%
1,000 - 3,499	174	103	59%
3,500 - 5,999	60	25	42%
6,000 - 9,999	37	14	38%
10,000 - 49,999	65	14	22%
> 50,000	13	1	8%

Why are we adverse to saying “smaller” is a new definition of “sustainable”?

Why are we planning for growth when none appears to be coming?

What are we going to do with all the buried, hard, aged infrastructure (i.e., pipes in the ground)?

What does “right-sized” infrastructure look like?

When are we going to have the hard environmental policy discussion about shrinking rural communities in the Midwest?



Thank You !

Philip Walsack
Missouri Public Utility Alliance

