
IDAHO
SMART
GROWTH
encouraging vibrant communities through sensible growth
Quality Infill Can help the Environment
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Growth Creates Potential Role for Infill to Improve the Environment

US Population

- **200 million in 1968**
- **300 million in 2006**
- **400 million in 2032**
- **500 million in 2050**

America adds 100 million people faster than any other nation except India and Pakistan –

But *faster* than China.

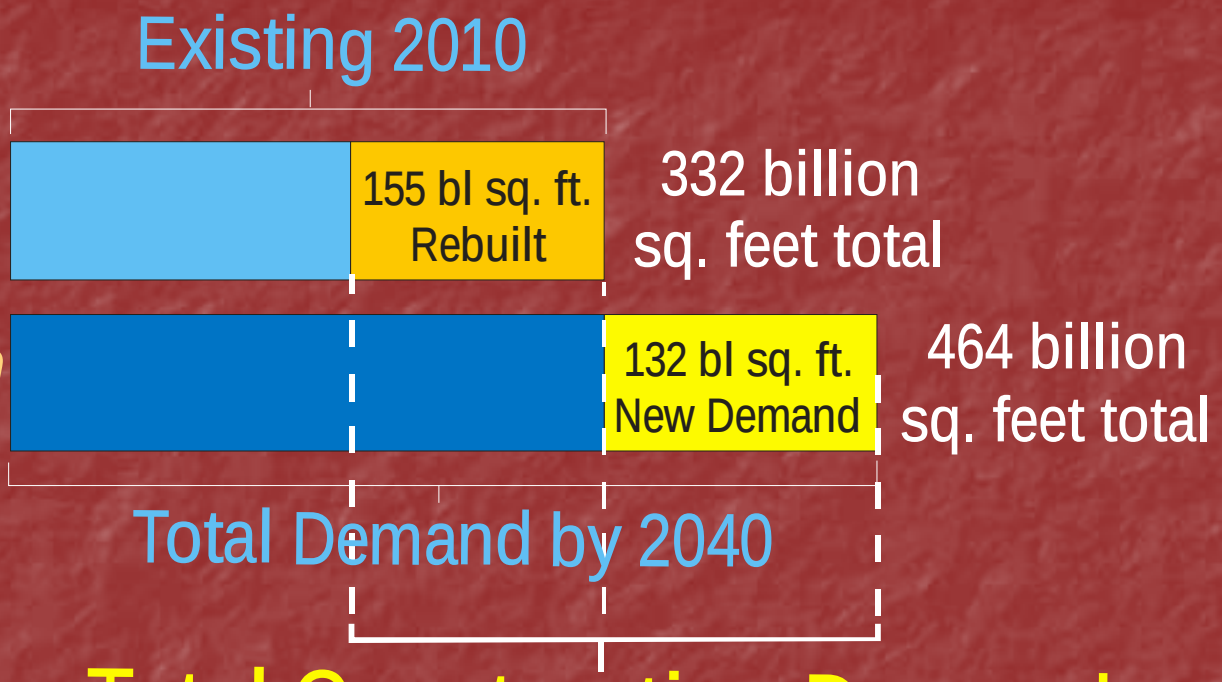
Idaho Population Growth 2000-2050

Area	2000	2050	% of yr 2000
Idaho	1.3M	2.8M	115%
Snake River Corridor	0.9M	2.0M	125%

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Growth Drives Future Building Need

US Building Construction Demand 2010 -2040



Total Construction Demand by 2040 = 287 billion sq. ft.

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Demands Created in Idaho

Housing Growth 2000-2050

Area	Growth units	Rebuild units	Total units	% of '00
Idaho	610k	185k	800k	150%
Snake River	445k	125k	570k	160%

Nonresidential Space Need 2000-2050

State	Growth S.F	Rebuild S.F.	Total S.F.	% of '00
Idaho	520M	920M	1.4B	380%
Snake River	370M	600M	1.0B	400%

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Households are Changing

US

Household Type	1960	2000	2040
HH with Children	48%	33%	26%
HH without Children	52%	67%	74%
Single/Other HH	*13%*	*31%*	*34%*

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Household Type	2000	2040
HH with Children	44%	33%
HH without Children	56%	67%
Single/Other HH	*20%*	*28%*

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Share of Growth 2000-2040

US

HH Type	Share
With children	14%
Without children	86%
Single/Other	*30%*

Idaho

HH Type	Share
With children	17%
Without children	83%
Single/Other	*38%*

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Future Housing Needs

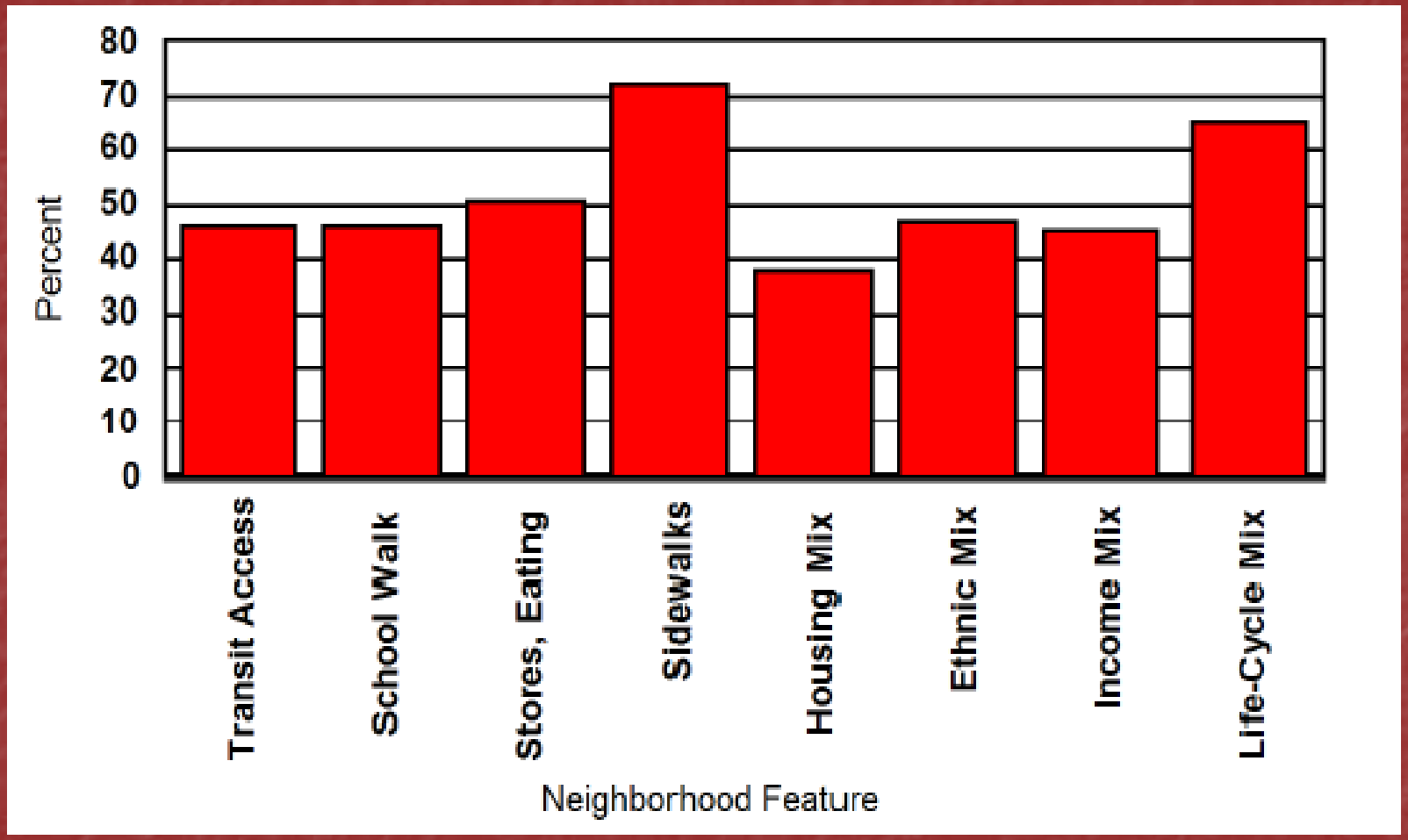
Looming Large-Lot Oversupply, 2005-2030

Unit Type	Supply in 2005	Change in Demand Preference 2030
Attached	39M	+15M
Small Lot	12M	+40M
Large Lot	58M	-23M

- Figures in millions of units.
- Change in preference based on low-range of preference survey averages.
- Figures for nation; figures for regions will vary.

Source: Arthur C. Nelson, Presentation at New Partners for Smart Growth 2005

Emerging Urbanity Preferences



***Source*: National Association of Realtors, American Preference Survey 2004.**

US Homes lost $2 trillion value in 2008

New Housing Market Realities

- Sub-prime mortgages are history
- Alt-A mortgages no more
- Conventional mortgages king
- "Jumbo" loans expensive and difficult
- Demand for $1million+ homes in 30 largest markets has tanked! It has gone *from 10%+* to *<5%*

Meaning

- Smaller homes, Smaller lots, More renters

***Home value loss Source*: Les Christie, CNNMoney.com staff writer. Dec. 15, 2008: 11:02 AM ET**

***Market Realities/Meaning Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah , Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

Translating Demand in 2050 - Idaho

	Living type	Number of people demanding
1%+	Downtown Boise:	*20,000 people (minimum)*
2%+	Secondary centers: (other downtowns etc.)	*40,000 people*
5%+	Center-accessible: (walking, transit)	*100,000 people*
25%+	Mixed-use, mixed-housing, walkable suburban:	*500,000 people*

= 1/3rd *of population in 2050 but ….*

= *2/3rds of all new development by 2050 in infill, smart growth and compact centers*

***Source*: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah, Mega Trends of the Snake River Corridor, Planning in the West Conference, Boise June 2009.**

How can this be used to Help the Environment

- **White Paper on Infill, Literature Review**

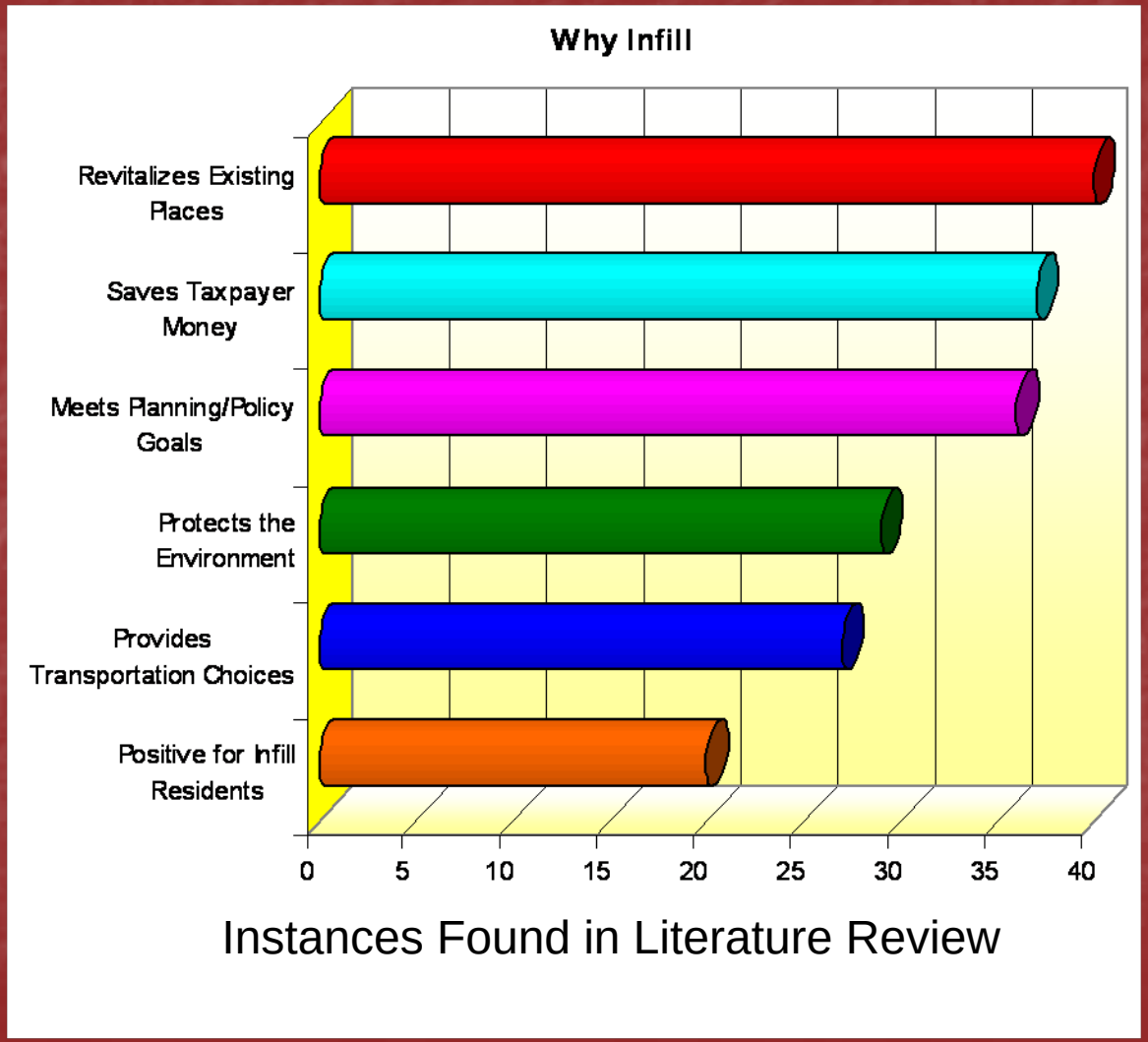
***Source*: Idaho Smart Growth/ULI Idaho, January 2010, http://www.idahosmartgrowth.org/images/uploads/files/quality_infill_final.pdf**

Introduction

- **Found three factors that affect infill**
  - Reasons to support infill – Why?
  - Benefits and Impacts of Infill – Consequences
  - Harder to build Infill – Barriers
- **Developed Ten Recommendations to reap maximum benefit from infill**
  - First: Develop Guiding Principles to provide Policy Basis for infill incentives and regulations – environmental benefits can provide the foundational policy basis

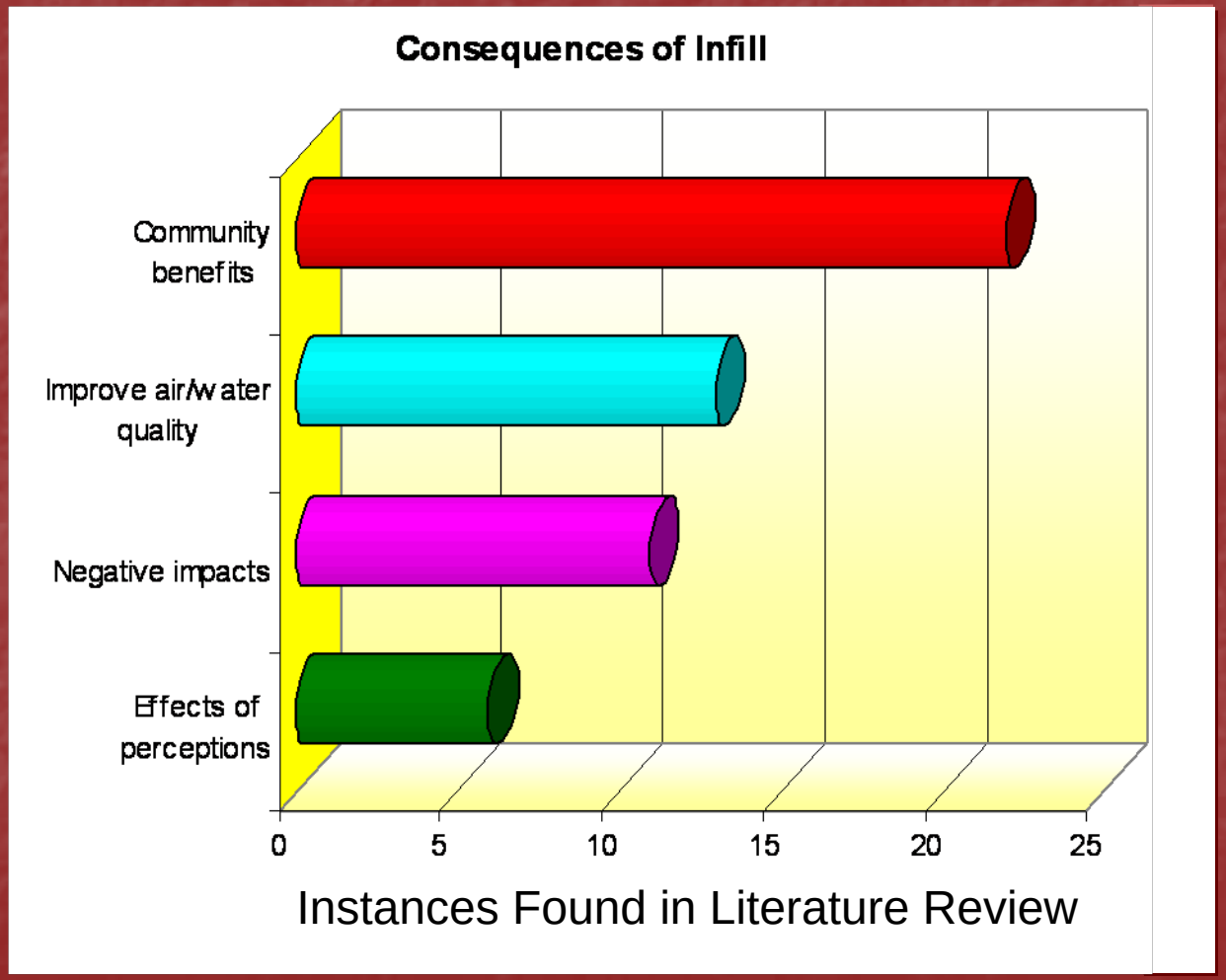
Why Infill

- Revitalization
- Saves Money
- Planning Goals
- Protects the Environment
- Transportation Choices
- Infill Consumer



Consequences of Infill

- Community benefits
- Improves Environment
- Impacts Existing Neighbors
- Effect of Perceptions



Infill Provides

Environmental Benefits

- Recycle used land, save fringe land
- Avoid Extending New Infrastructure
- Reduce Vehicle Miles Traveled
- Improve Air Quality
- Improve Water Quality
- Use Less Energy
- Clean-up Contaminated Properties

Recycle used land, save fringe land

- Reduce demand to develop greenfields, Reclaim existing developed land

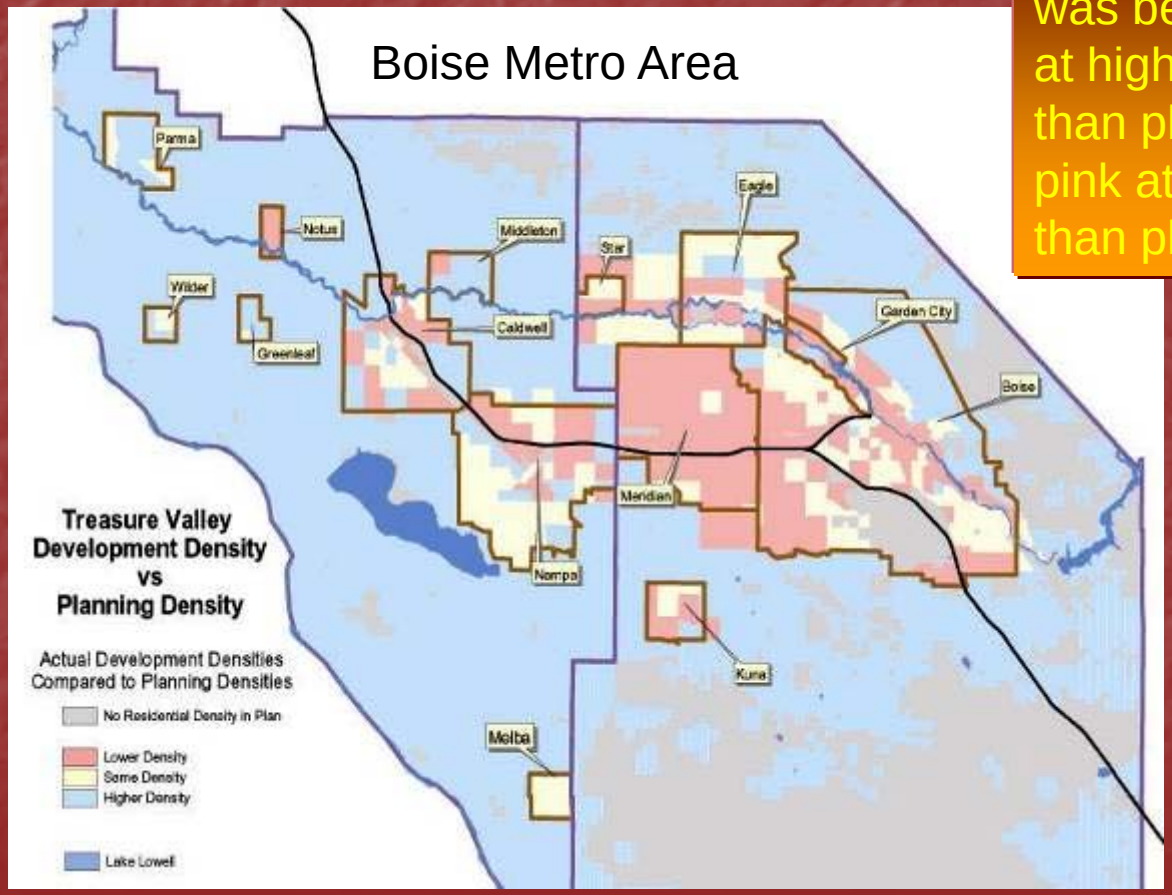
Skipped over land in Boise's first tier suburban development, ripe for infill and redevelopment

Environmental Benefits of Infill

Avoid Extending New Infrastructure

- Building and Maintaining new infrastructure uses GHGs

Everything in Blue was being developed at higher densities than planned for, in pink at lower densities than planned for.

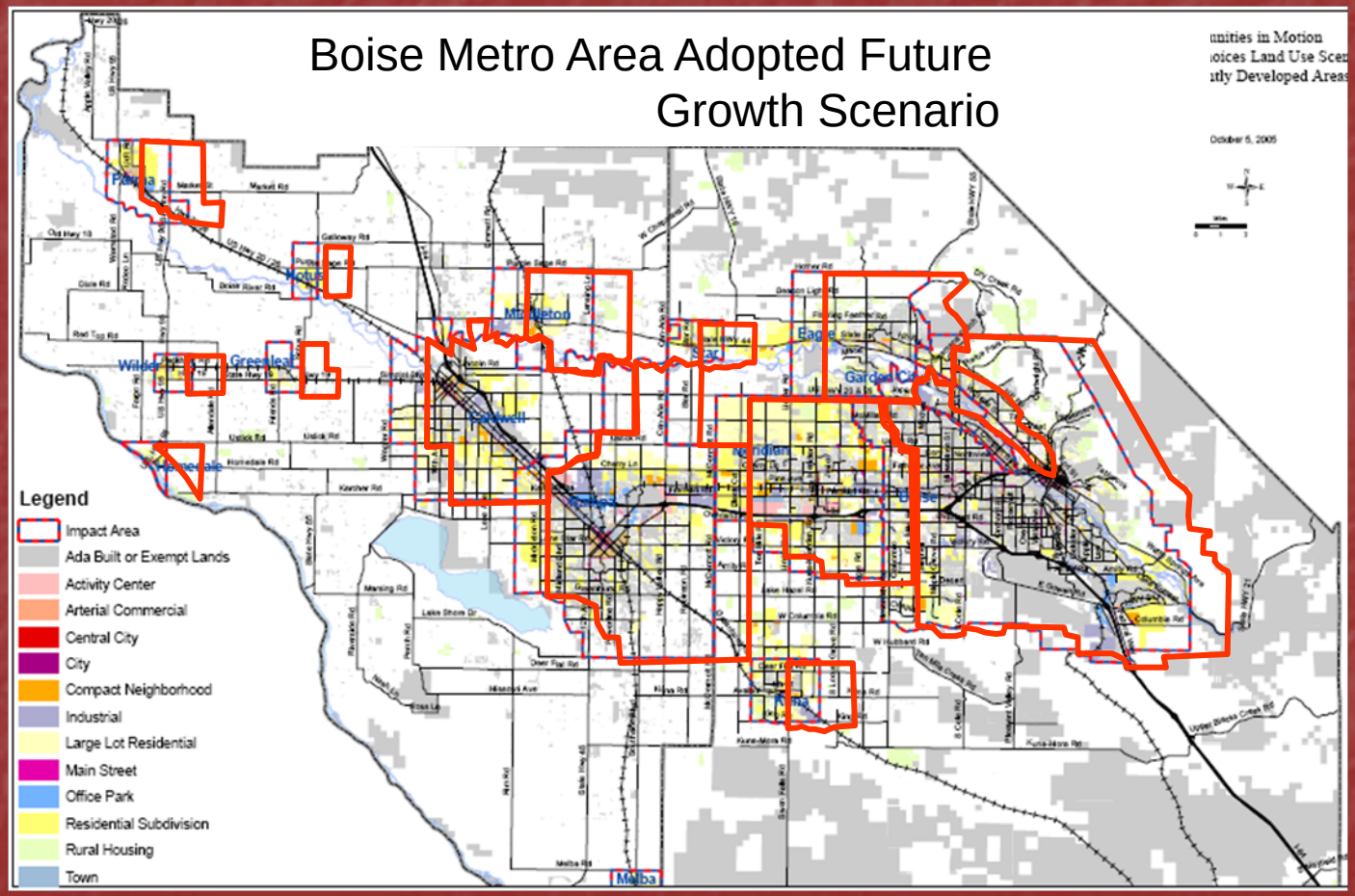


Source: **Treasure Valley Futures Study, 2000**

Environmental Benefits of Infill

Avoid Extending New Infrastructure

- Decide where growth should occur



Mixed use and higher densities within areas identified for growth = 75,000 new residents within existing city boundaries in Boise

Implications

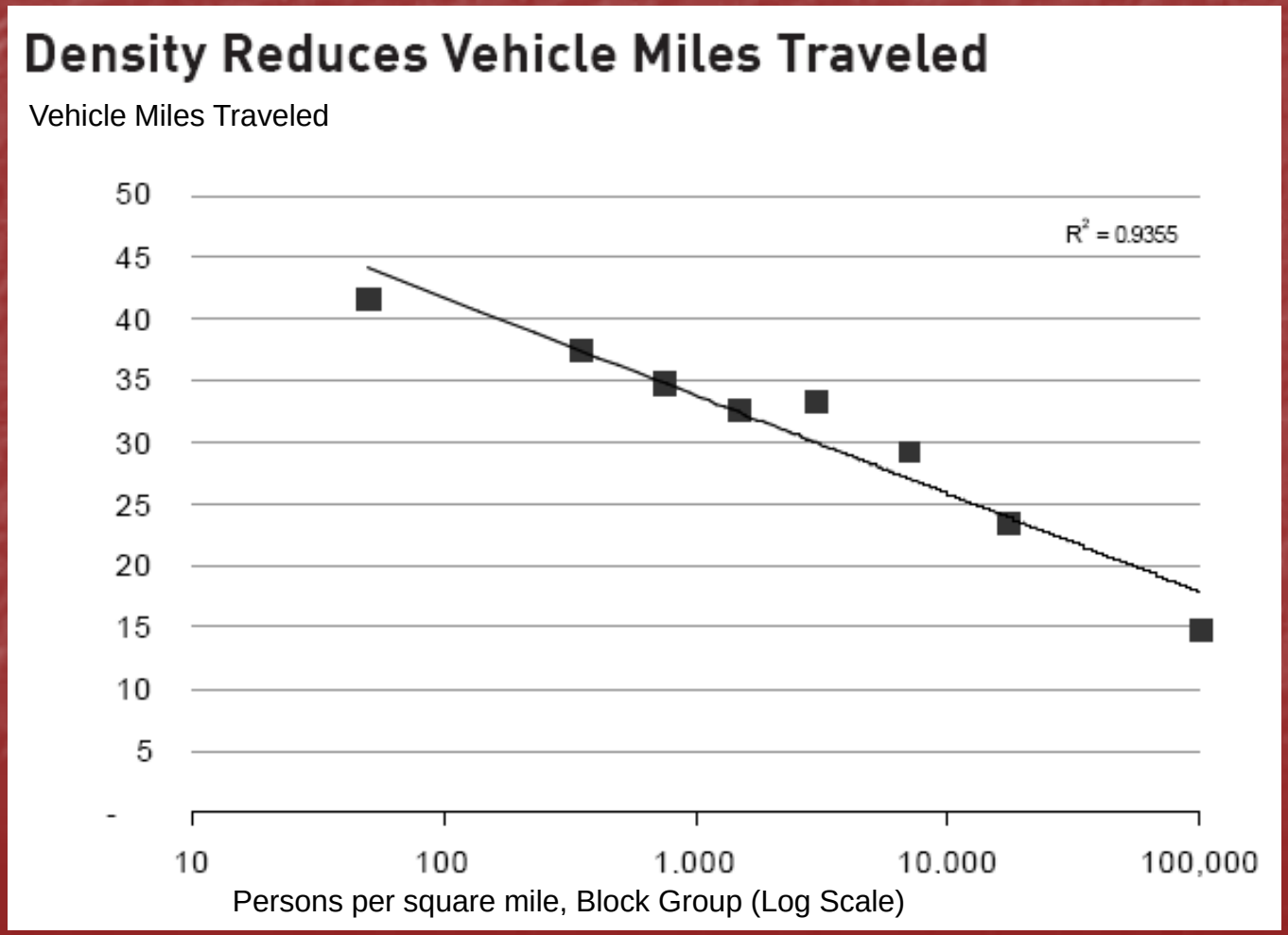
- Saves 83,200 acres from development
- 1.1 Million fewer vehicle miles traveled daily

Environmental Benefits of Infill

Source: **Communities in Motion Long Range Transportation Plan, Community Planning Association of Southwest Idaho (COMPASS) 2004**

Reduce Vehicle Miles Traveled

- Improves Transportation Choices by increasing density and mix of uses



Source: National Household Travel Survey, 2002

Environmental Benefits of Infill

Reduce Vehicle Miles Traveled

- Improves Transportation Choices by increasing density and mix of uses






Higher density infill housing within Boise's urban core, added in last 5 years.

Enviromental Benefits of Infill

Improve Air Quality

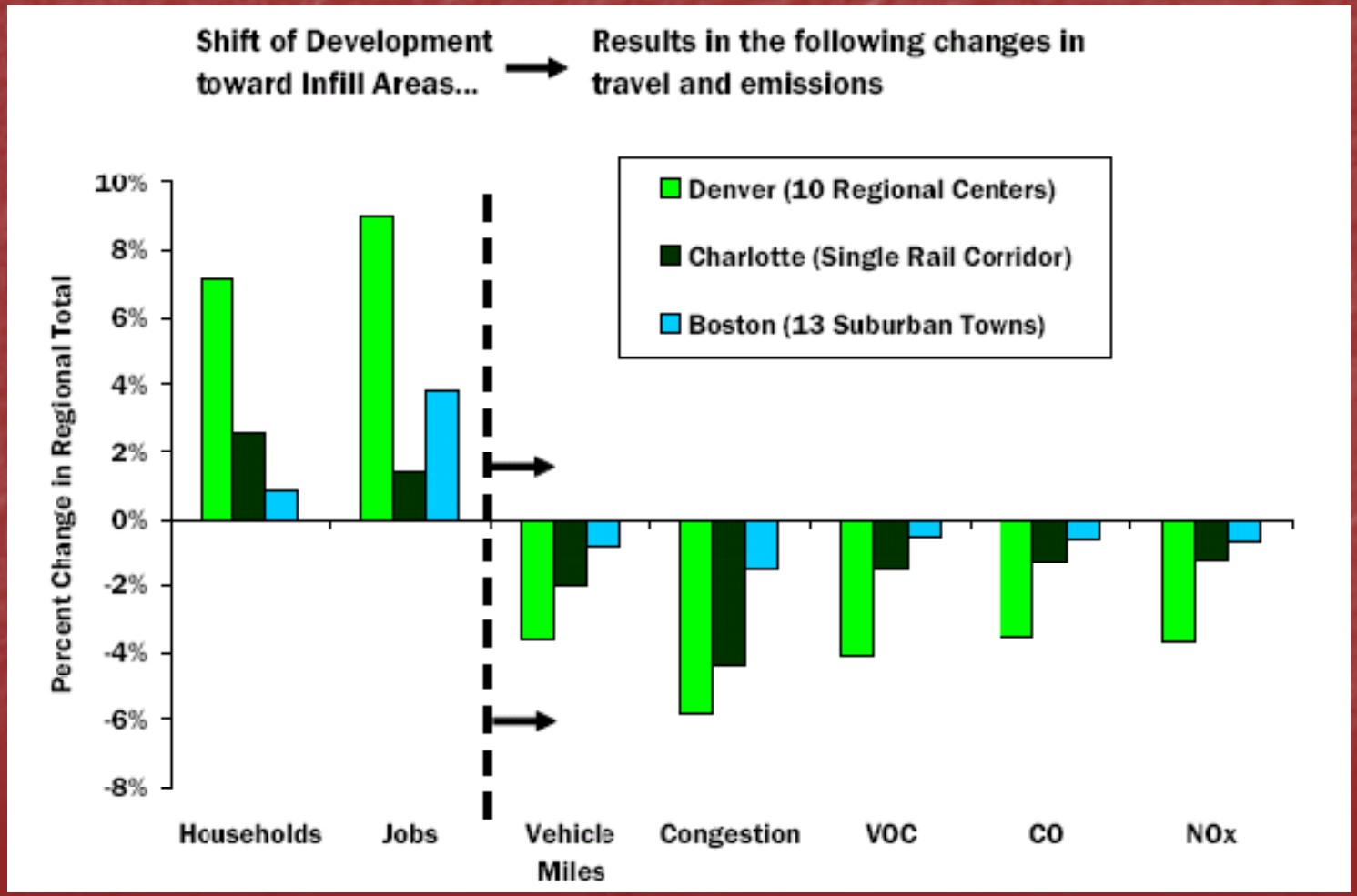
- Fewer miles driven reduces transport related CO_2 emissions

Active transportation opportunities near infill in Boise

Enviromental Benefits of Infill

Improve Air Quality

- Fewer miles driven reduces transport related CO_2 emissions



Source: Measuring the Air Quality & Transportation Impacts of Infill Development, EPA 231-R-07-001, http://www.epa.gov/smartgrowth/pdf/transp_impacts_infill.pdf

Improve Water Quality

- Reuse and filter run-off and other water on site

Banner Bank Building - Boise

Platinum LEED

- 65% less electricity use
- 80% less water use
- Recycles storm drain run-off from 5 block area
- Uses second run geothermal for heating

Enviromental Benefits of Infill

Uses Less Energy

- Smaller units, attached units use less energy than single family detached

"Increasing residential density in urban form may comprise a significant component of broader energy conservation and GHG reduction policies."

Source: **Journal Of Urban Planning and Development © ASCE / March 2006 Comparing High and Low Residential Density: Life-Cycle Analysis of Energy Use and Greenhouse Gas Emissions**

Environmental Benefits of Infill

Clean-up contaminated properties

- Vacant contaminated properties are cleaned-up when recycled with Infill

Front Five Building - Boise

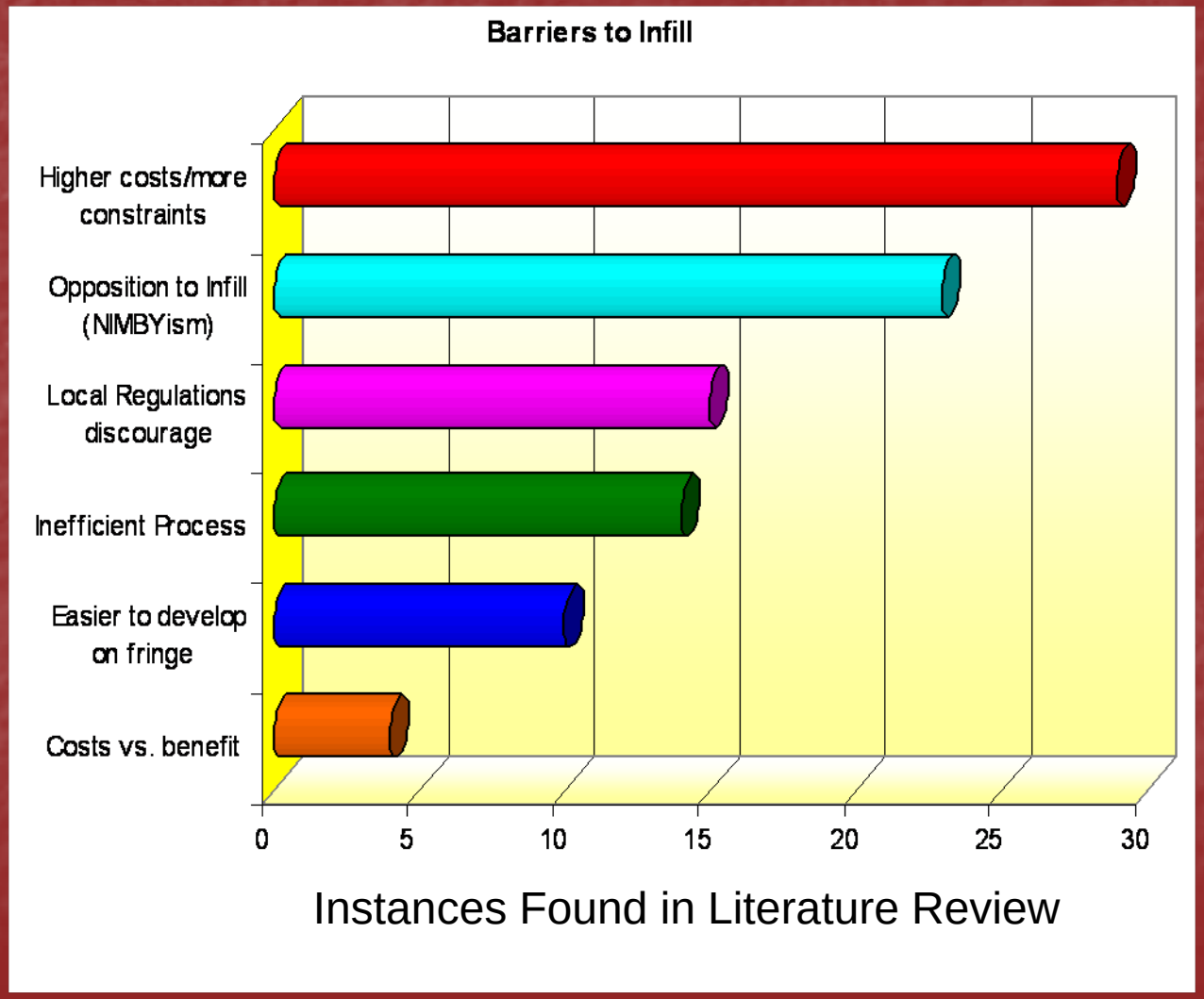
Silver LEED

- Adaptive Reuse with addition
- Innovative Storm water management

Environmental Benefits of Infill

Barriers to Infill

- High Costs
- NIMBY Opposition
- Local Regulations
- Approval Process
- Easier to develop on Fringe
- Cost/Benefit



Recommendations to Encourage Quality Infill

Develop Guiding Principles in support of Infill to provide policy basis for infill strategies

Environmental Goals can provide foundational basis

Develop Guiding Principles

Washington: Infill Development

Completing the community fabric

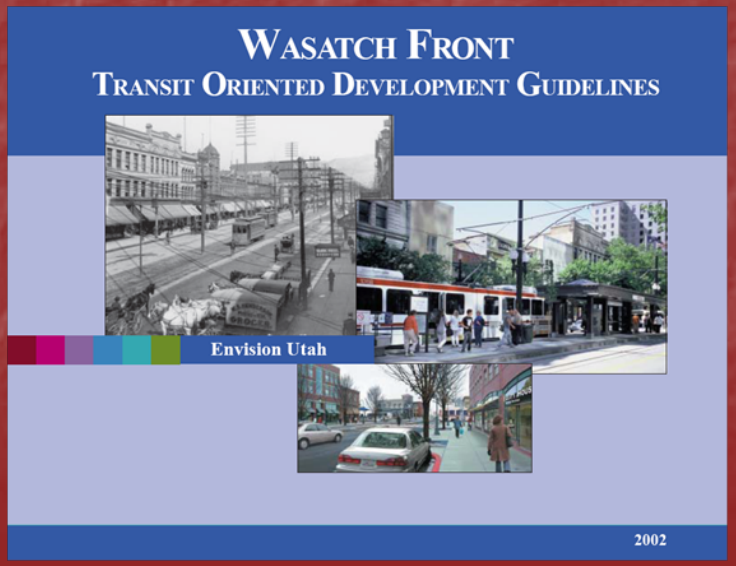
M·R·S·C

Municipal Research and Services Center of Washington

Working Together for Excellence in Local Government

Utah: Envision Utah

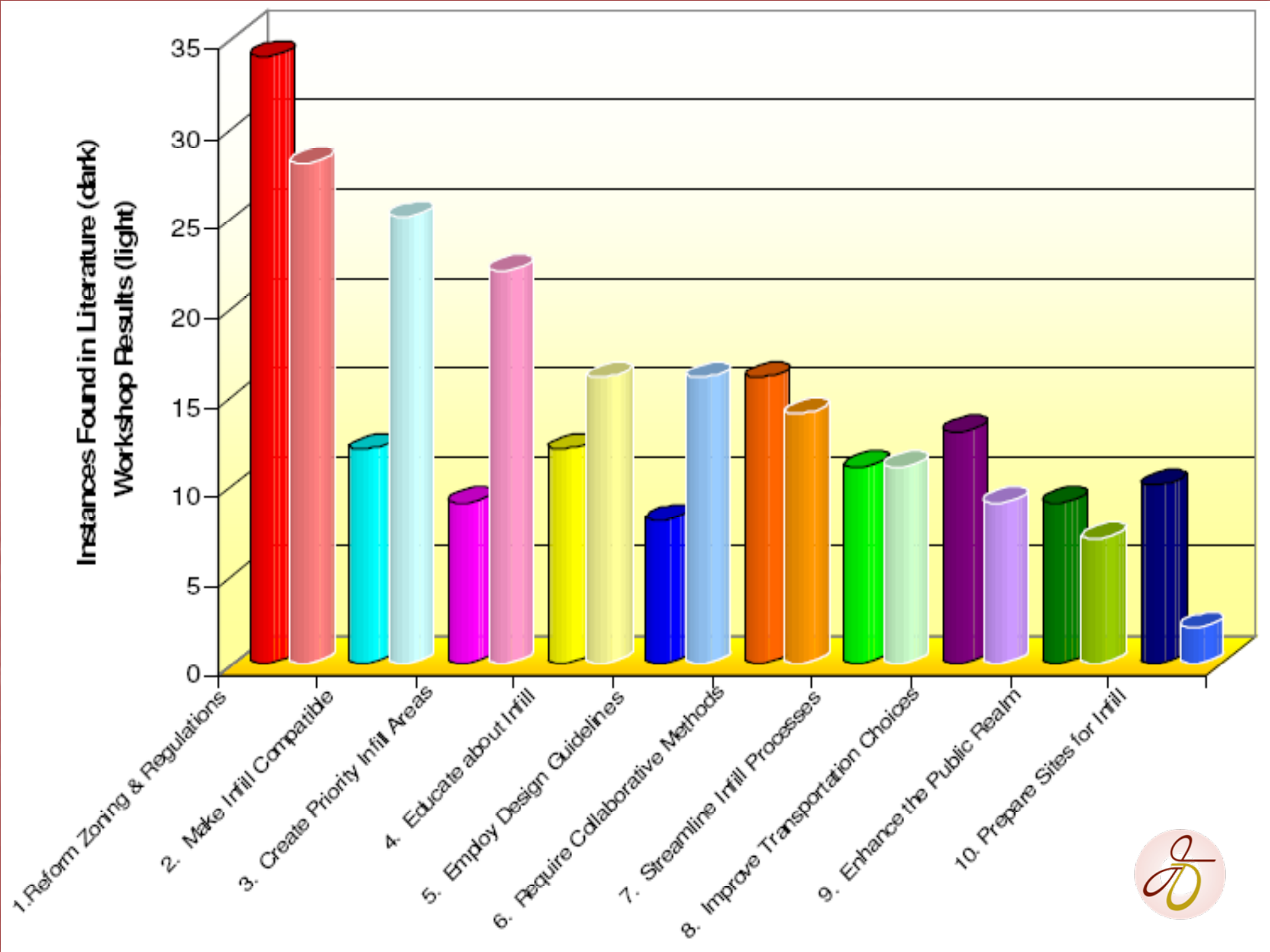
Toolboxes



Recommendations for Quality Infill

What concrete steps can you take now to ensure that infill improves the environment in your community?

1. Reform Zoning and Regulations
2. Make Infill Compatible
3. Create Priority Infill Areas
4. Educate about Infill
5. Employ Design Guidelines
6. Require Collaborative Methods
7. Streamline Infill Processes
8. Improve Transportation Choices
9. Enhance the Public Realm
10. Prepare Sites for Infill


Instances Found in Literature (dark)
Workshop Results (light)
35
30
25
20
15
10
5
0
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Questions?

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Find Quality Infill study at:
http://www.idahosmartgrowth.org/index.php/resources/resource/recommended_reading/