



The Rise of the Megaregion

Catherine L. Ross, Harry West Professor
Director of Center for Quality Growth and Regional Development
Georgia Institute of Technology

New Partners for Smart Growth, St. Louis, MO
February 3, 2017

Agenda

- Overview of the Megaregion
- Megaregion Activities
- Megaregion and Sustainability



Overview of the Megaregion

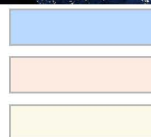
Megaregion

Megaregions are networks of **metropolitan centers** and **their areas of influence**, linked by geographic proximity, shared environmental concerns, and social, cultural, and economic ties (Ross and Woo, 2011).

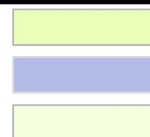
Emerging Megaregions

Why Megaregion Matters

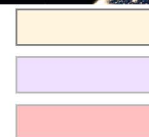
	Area	Population (2013)	Employment (2013)	GRP (2013)	CO ₂ emission (2002)	Fortune 500 companies' revenue (2014)	Patent (2013)
Megaregion	25%	75%	76%	80%	68%	87%	90%
Non-megaregion	75%	25%	24%	20%	32%	13%	10%



1 Cascadia Megaregion
 2 California Megaregion
 3 Arizona Megaregion



4 Texas Megaregion
 5 Central Plains Megaregion
 6 Midwest Megaregion



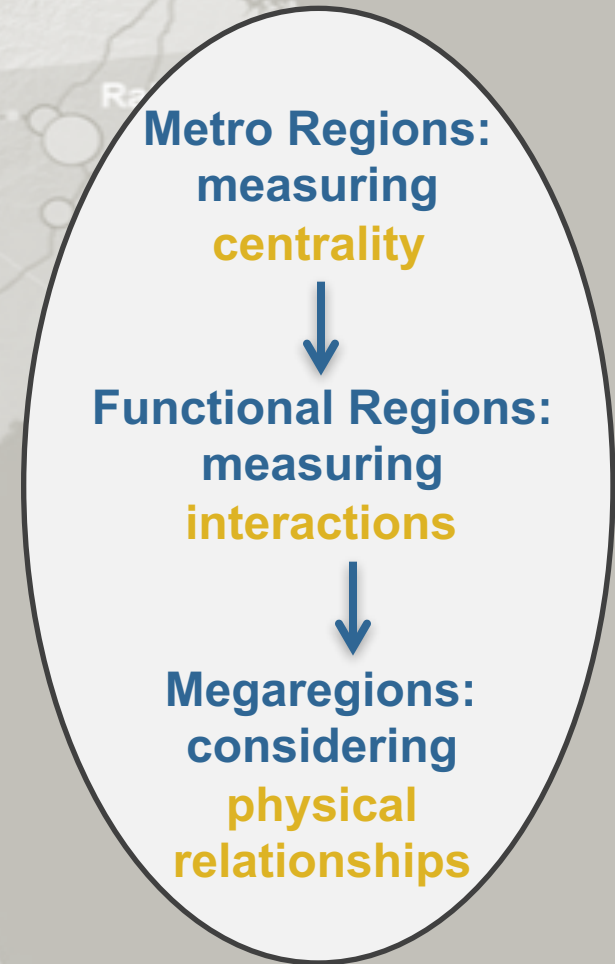
7 Northeast Megaregion
 8 Piedmont Megaregion
 9 Florida Megaregion

Megaregion

Core areas are urban centers and their metropolitan sphere of influence which comprise the **core** of the megaregion.

Functional regions are groups of metro regions linked through economic **interaction** and geographic proximity.

A megaregion is a **functional** region with an additional layer of shared social, cultural, and environmental characteristics.



Megaregions Global Rise

- The world's mega-regions may be home to more than **100 million** people (UN report, 2010). The world's 40 largest megaregions cover only a tiny fraction of the land, but account for **66% of global economic activity** and about **85% of technological and scientific innovation**.

Megaregion Benefits

Internalize Externalities (e.g., pass-through congestion, pollution)

Inter-region Economic Complementarities

Correspondence with 'Problem-Shed'

Coordinate Infrastructure Investment

Compete at Different Global Scale

Megaregion Benefits



Enhance Economic Development across Jurisdictional Boundaries

Share Best Practices

Promote Data Collection, Sharing, and Use



Megaregion Activities

History of Megaregion Activities



I-95 Corridor Coalition

- Founded in early 1990s
- Maine to Florida
- Projected 100% increase in truck volumes from 2011 to 2040

Mid-Atlantic Rail Operations (MAROPs)

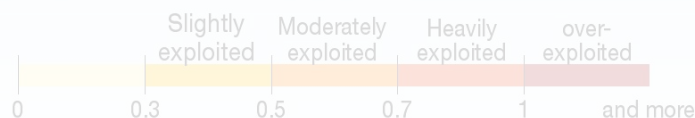
- Led by I-95 Corridor Coalition (2009)
- 5 Mid-Atlantic states, 3 railroads
- Document rail condition and chokepoints

Global Water Overuse and Scarcity

"I can imagine people for the first time are aware of the fact that their water needs are connected to water resources elsewhere in their megaregion"

--- said Juliette Michaelson, Vice President for Strategy at the Regional Plan Association (Hansen, 2015).

Water stress indicator (WSI) in major basins:



PHILIPPE REKACEWICZ
FEBRUARY 2002

Sources: Smakhtin, Revenga and Döll, 2004.

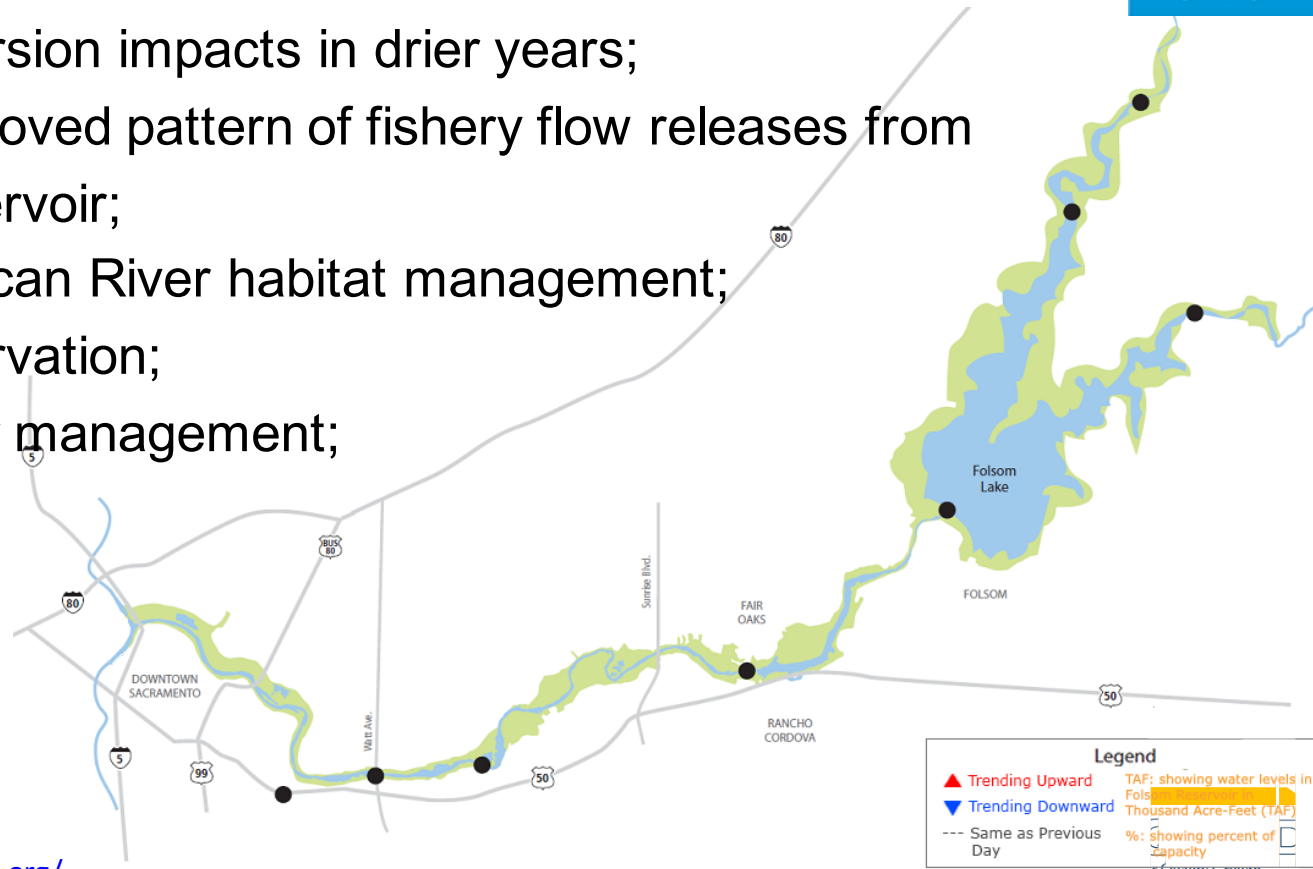
Image Source: <http://www.unep.org/dewa/vitalwater/article77.html>

Source: Berg, (2009)

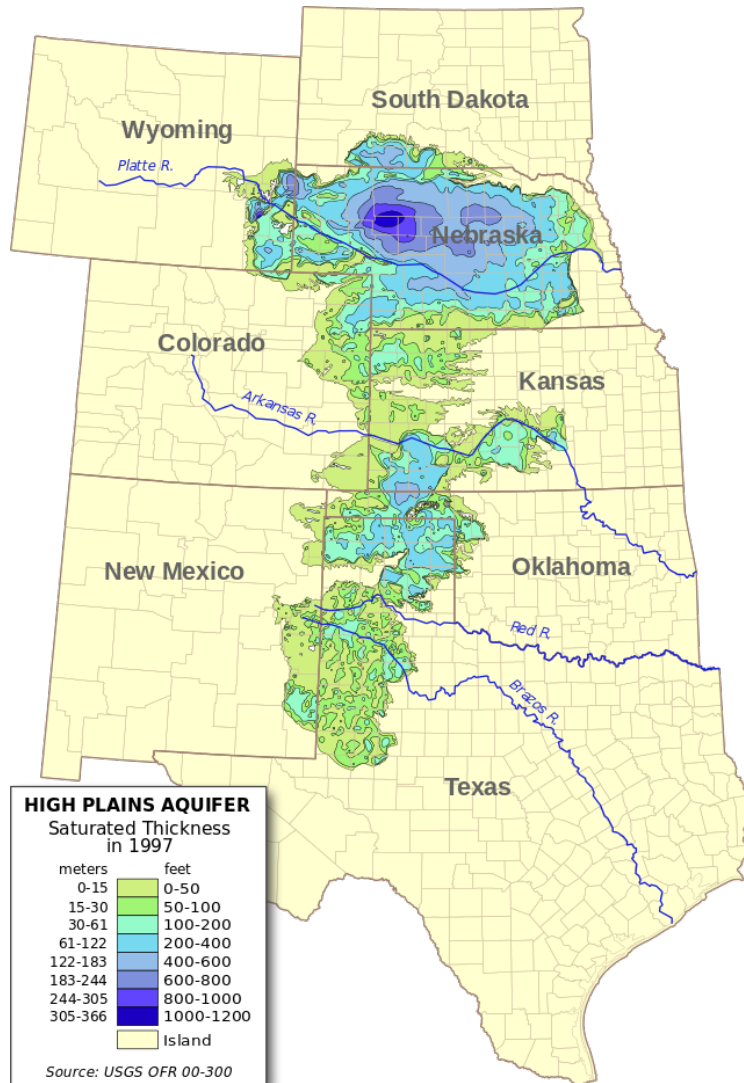
The Sacramento Water Forum (Water Supply and Conservation)



- Includes governments, water districts, environmental organizations, and businesses in a single large northern California watershed to:
 - Address increased surface water diversions;
 - Reduce diversion impacts in drier years;
 - Support improved pattern of fishery flow releases from Folsom Reservoir;
 - Lower American River habitat management;
 - Water conservation;
 - Groundwater management;



Multi-jurisdictional Aquifer Management (Water Resource Management)



- Ogallala Aquifer (Central Plains Megaregion)
- Ogallala supports 20% of American Agriculture
- Sustainable mining would require reducing outflow by around 80%
- Multi-jurisdictional issues of management

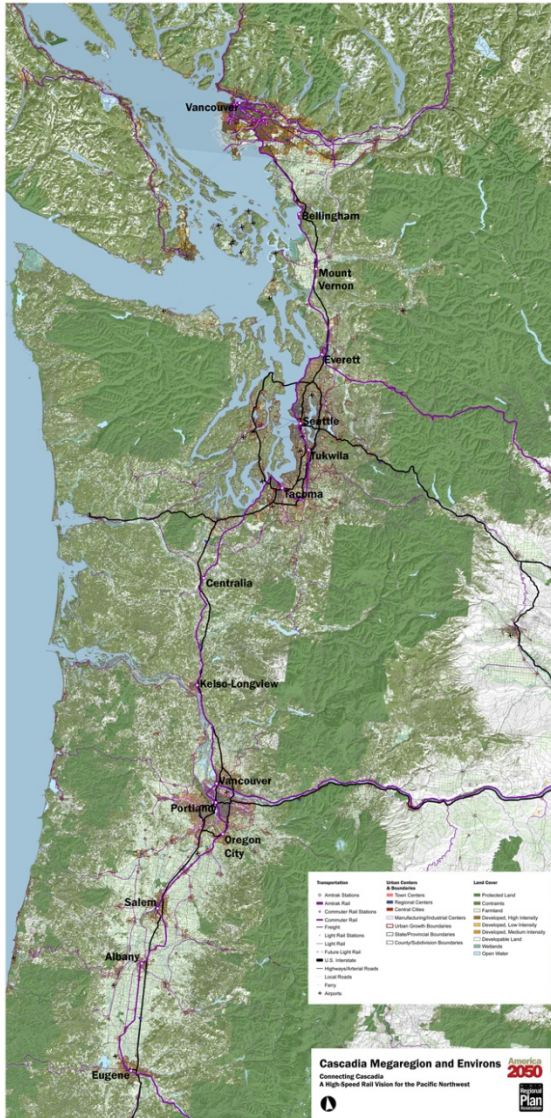
Image Source: Mächtigkeit der Sättigungszone des Ogallala-Aquifers (1997)

"Megaregion planning involves transportation planning and decision making that is executed across boundaries for mutual benefit. It can be a very flexible short term arrangement or a long term arrangement with many agencies."

Source: FHWA (2015)

<http://www.fhwa.dot.gov/planning/megaregions/index.cfm?redirect>

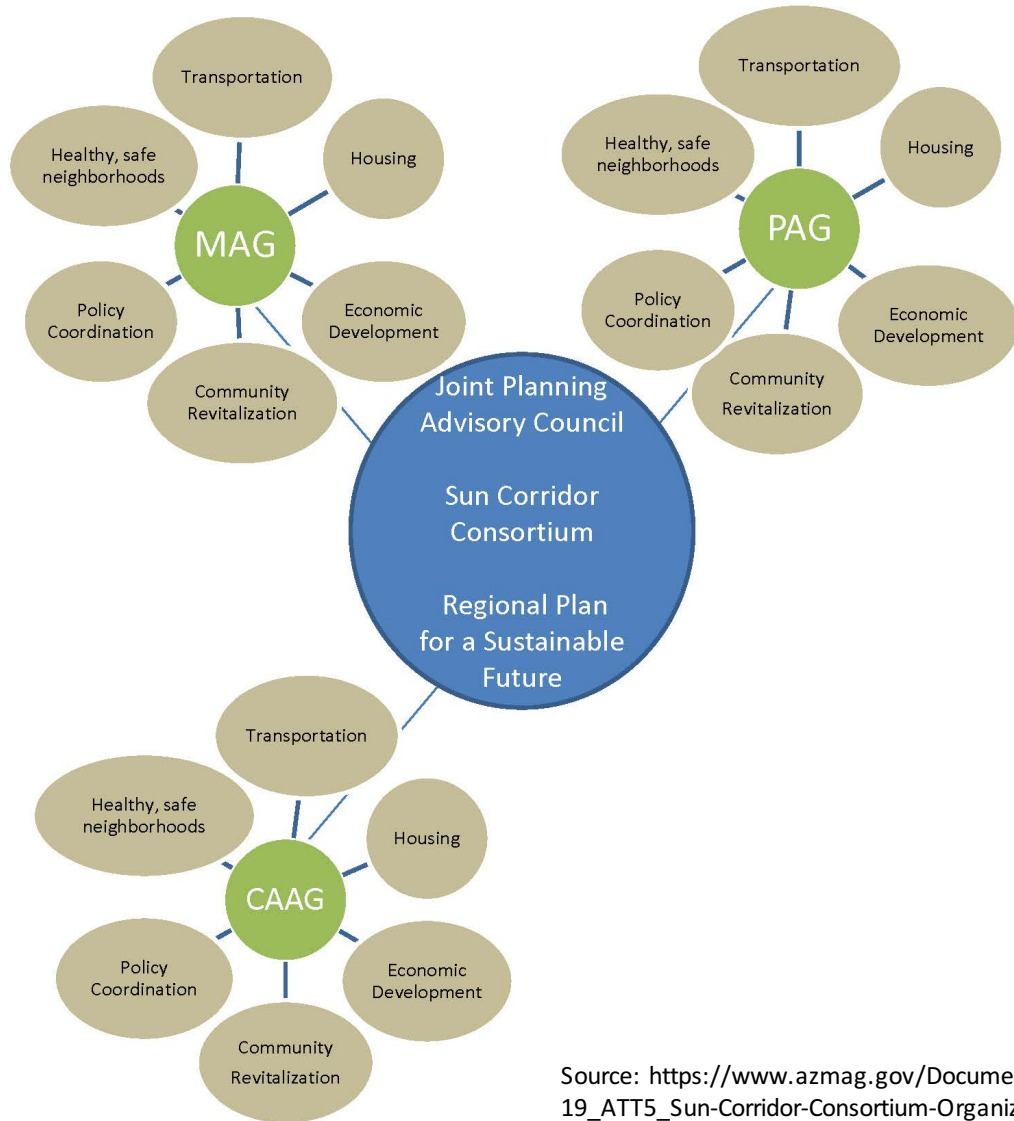
Binational and Tristate Connection in Cascadia Megaregion



- Core cities in Cascadia megaregion are linked by Interstate-5 highway.
- I-5 is projected to experience a 487% increase in freight demand by 2035.
- Cross-border tourism is expected to grow significantly
- How to plan for binational and tristate transportation infrastructure?

Image Source: <http://www.america2050.org/maps/2050-Map-Cascadia-Megaregion-and-Its-Environs.png>

Example of Megaregion Activities: Arizona Sun Corridor Consortium



Roles

Livability Work Groups:
engage community, collect data and best practices, recommend strategies

Regional Hubs: Organize work groups, approve menu of strategies, develop regional approach

Joint Planning Advisory Council: Develop Sun Corridor strategies and sustainability plan

Joint Venture Silicon Valley

- Non-governmental organization started in 1993
- Bring together public and private actors in Silicon Valley
- Address issues of economy and quality of life

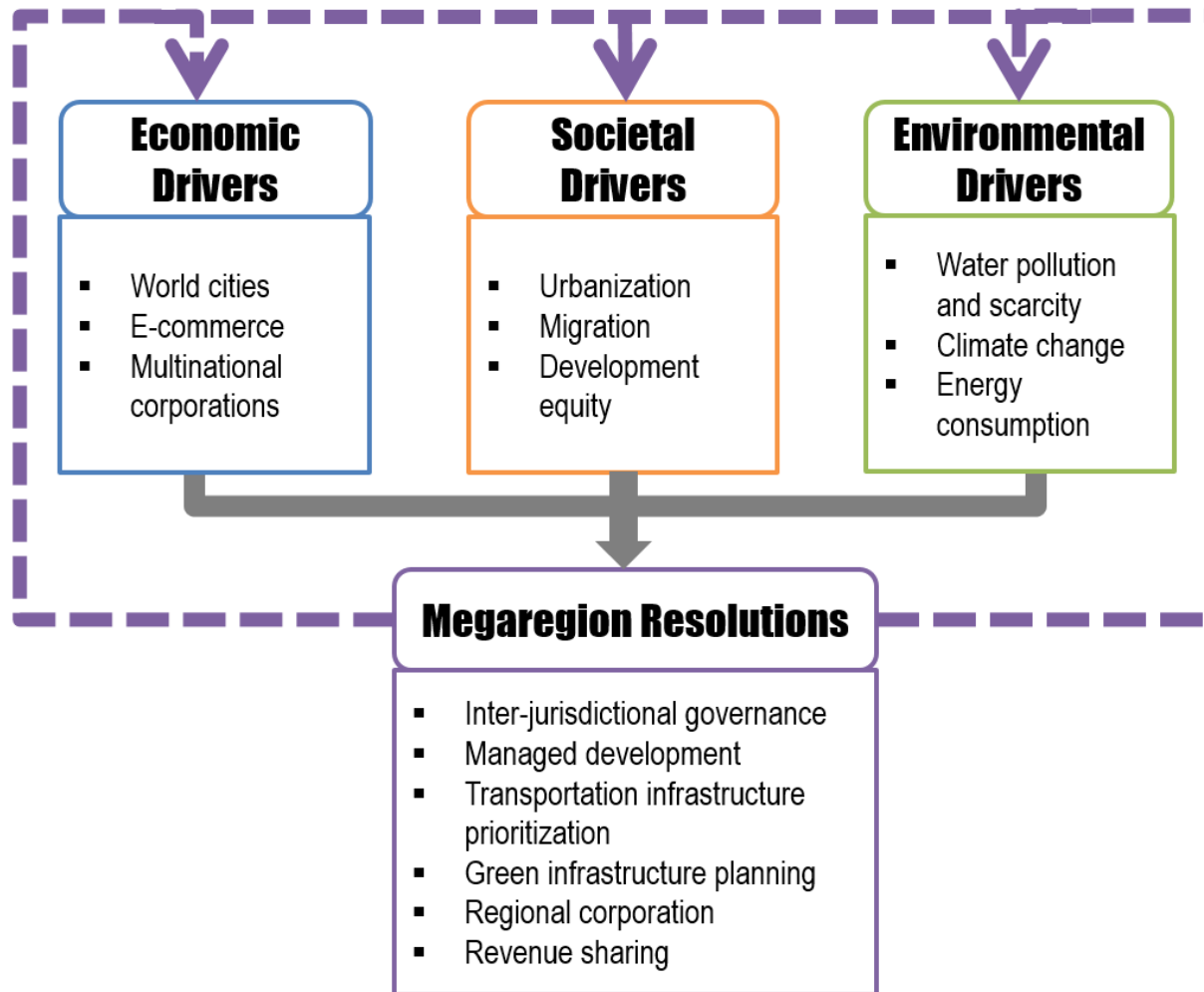




Megaregions & Sustainability

Can Megaregion Planning be a New Approach for Sustainable Development?

Selected Megaregion Drivers



Emerging Demands

- Panama canal expansion; ports expansions; global shipping pattern shifts
- Old infrastructure with insufficient capacity will suppress economic activities
- Freight flow changes with infrastructure change and population growth
- Environmental problems are cross jurisdictional borders
- Private-Sector Involvement
- Distribution Center Sprawl
- Electronic business grows rapidly
- Information technology facilitates new travel modes and information collection methods

Megaregion Solutions

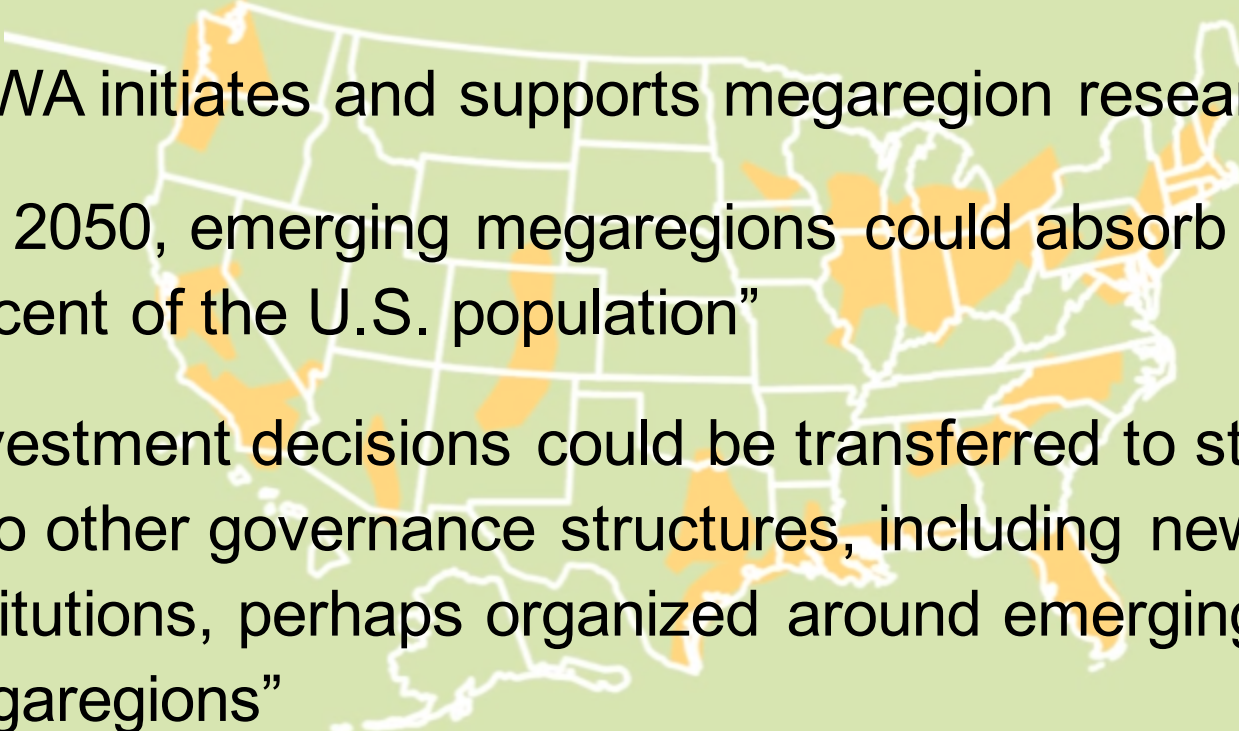
Enhancing Economic Competitiveness – Megaregion Infrastructure Planning

- Manage Interstate Corridor Congestion
- Promote Infrastructure-Based Economic Activities: Ports, High-Speed Rail, Airports
- Facilitate Economic Development in Peripheral and Rural Areas
- Augment the spill-over effects across urban network

Manage Resources Through Megaregion Collaboration, Planning and Implementation

- Land consumption
- Resource management
- Energy consumption
- Climate change
- Emission reduction control
- Water resources management
- Habitat preservation

Megaregion Leadership

- US DOT: Beyond Traffic Megaregion Forums
 - FHWA initiates and supports megaregion research
 - “By 2050, emerging megaregions could absorb 75 percent of the U.S. population”
 - “Investment decisions could be transferred to states, or to other governance structures, including new institutions, perhaps organized around emerging megaregions”
- 

What would a Sustainable Megaregion Planning Framework look like?

