



Turning Rust to Blue: The Great Lakes New “Blue Economy”

Big Today – Unlimited Opportunity Tomorrow

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Brookings Institution Non-Resident Senior Fellow
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We always talk about the Great Lakes region, with 20% of world's surface freshwater, around which live **50,000,000 people**



And the scale of our waterfront real estate...

**THE GREAT LAKES & ST. LAWRENCE RIVER REGION
HAVE OVER 11,000 MILES OF LAKE FRONTAGE**

**THIS EQUATES TO THE DISTANCE BETWEEN CHICAGO,
ILLINOIS, & PERTH, AUSTRALIA.**

CHICAGO

PERTH

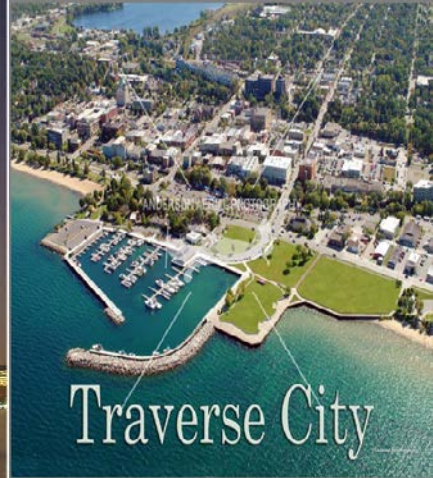
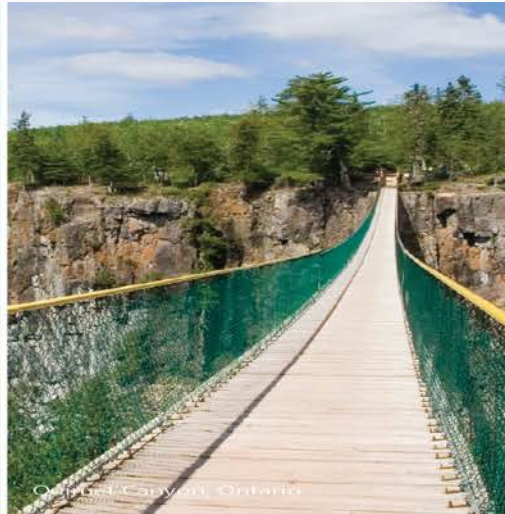
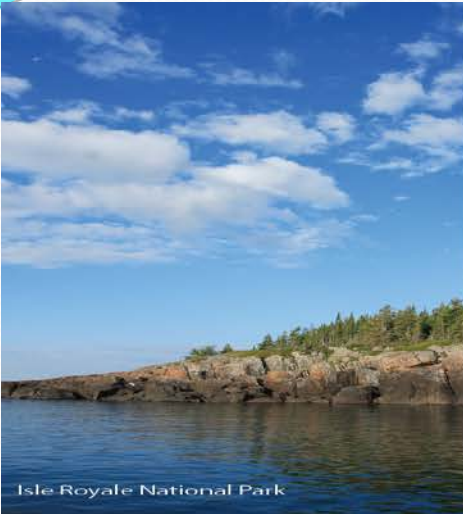




And our world leading centers of research and learning...

- TOP INSTITUTIONS OF HIGHER LEARNING
- 20 OF WORLD'S BEST RESEARCH UNIVERSITIES ARE HERE – MORE THAN ANY OTHER REGION
- JOINING RICH NETWORK OF COLLEES & COMMUNITY COLLEGES TO PRODUCE THE TALENT - ENGAGED IN THE FUTURE OF WATER, TECHNOLOGY AND THE PLANET
- PUBLIC-PRIVATE SECTOR INNOVATION
- GLOBAL CLASSROOM
- LED GREEN REVOLUTION – CAN LEAD BLUE REVOLUTION

And how water makes magical places to live, work & play



BROOKINGS

And with *Healthy Waters, Strong Economy: Economic Impact of Great Lakes Restoration* report, came the reality that clean water and restoration make you rich! Lakes and their waterways are a major economic and environmental asset

Metro benefits of restoration, in millions of 2006 dollars:

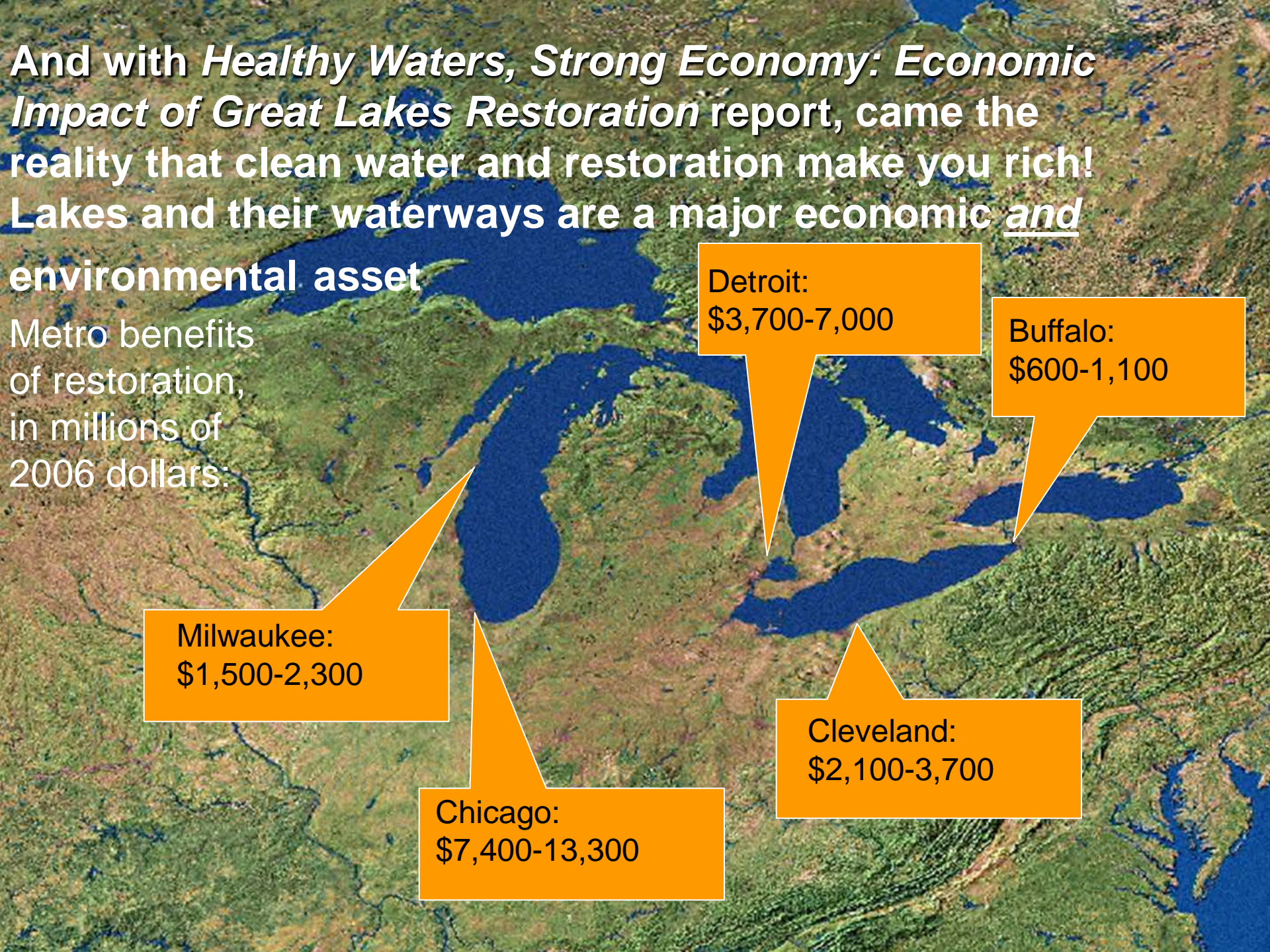
Detroit:
\$3,700-7,000

Buffalo:
\$600-1,100

Milwaukee:
\$1,500-2,300

Chicago:
\$7,400-13,300

Cleveland:
\$2,100-3,700



But what does this really add up to?...What is this Blue Economy?



Great Lakes Blue Economy

Building on Great Lakes region's abundant water, access to water, water education and innovation assets to grow jobs and incomes

Five ways water matters to the economy today



Legacy Uses: Shipping, Ports, Commercial Fishing



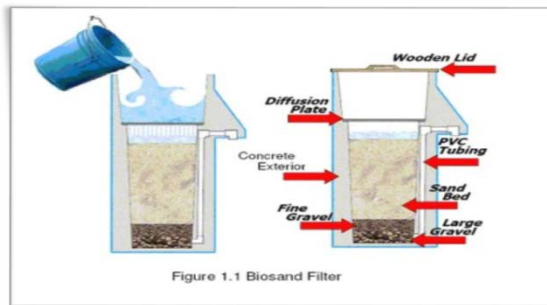
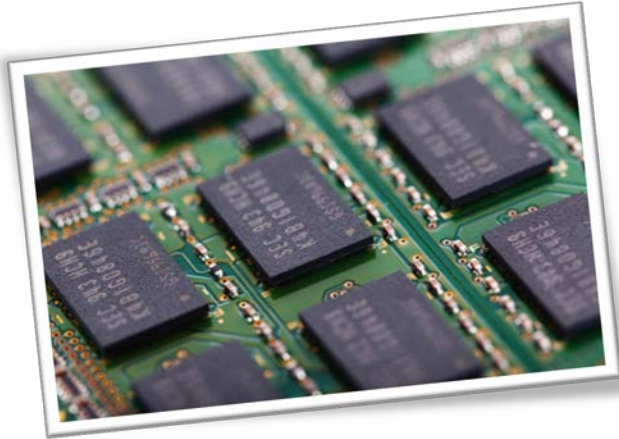
Great Lakes States and Provinces: Over 200,000 jobs

Big Water Using Businesses: Agriculture, Energy, Manufacturing, Beverages



Great Lakes States and Provinces: 5.3 million jobs
Almost 1/3 as many as total US

Emerging Water Products and Services For Trillion \$ Global Water Technology Market



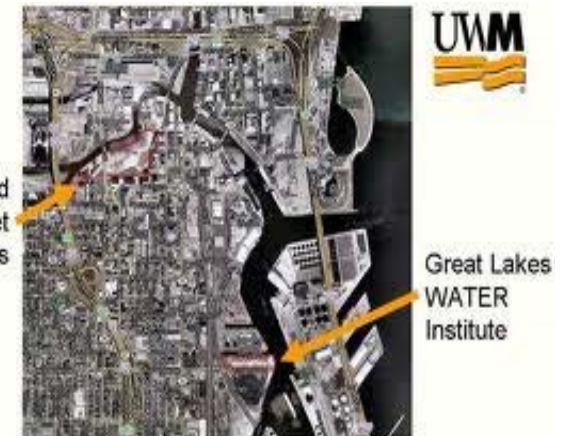
Great Lakes States and Provinces: 1.2 million jobs
(Almost 1/3 as many as total US)

Fast-growing VC \$ to water tech: over \$370 million
in US; \$50 billion water asset funds globally

Centers of Education, Research and Innovation



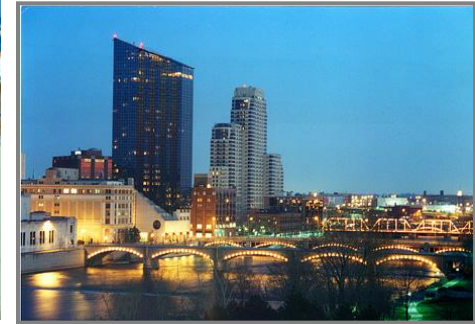
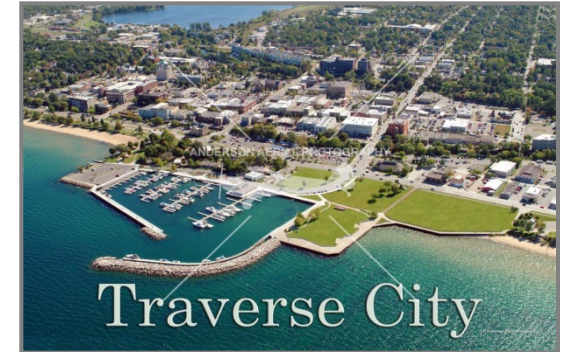
Michigan Tech



If Michigan's 3 top Research Universities do \$300 million in R&D
Great Lakes 20 Top Tier: \$2 billion in water R&D

If Michigan's 9 Univ. Water Centers, 18 Community Colleges train
thousands in water work; Great Lakes Universities-Colleges educate
tens of thousands

Water Place-making and Lifestyle



If Michigan's Restoration, Place-Making, Boating, Fishing, Recreation and Tourism adds up to 210,000 jobs and \$7.5 billion annually

Great Lakes States and Provinces well over 1 million jobs - \$50 billion

‘Blue really is the New Green’

Green Economy

Wind, solar, battery, bio-mass, next energy technology creation

Building retrofits, turbine machining, solar panel production, transit-building: “green collar jobs”

“Greenways”, parks, open-space: “green” places

Green lifestyles and values: Green roofs, recycling, local food, energy conservation, sustainable living

Blue Economy

Water cleaning, monitoring, conservation products and services

Building retrofits, water infrastructure repair, Filter making, “blue-collar” jobs

“Blueways”, wetland preservation, waterfront renewal, water trails

‘Blue’ lifestyles and values: Rain-gardens, grey water systems, green infrastructure water-saving lifestyles

And when you put the Blue Economy building blocks together

Look at Milwaukee....

River makeover....Open up Lake Michigan...Celebrate Lake Univ. of Wisconsin-Milwaukee Water Institute....Marquette Water Law and Business...Water Cluster - The Water Council....BadgerMeter, A.O.Smith, Veolia, Koehler.... One of UN global cities leading in water innovation



Grand Rapids....“Greenest” US mid-size city, led by smart water use...putting “rapids” back in the Grand...core city redevelopment facing the river for talent retention...repurpose manufacturing like Cascade Engineering water purifying products.... GVSU- Annis Water Resources Institute.



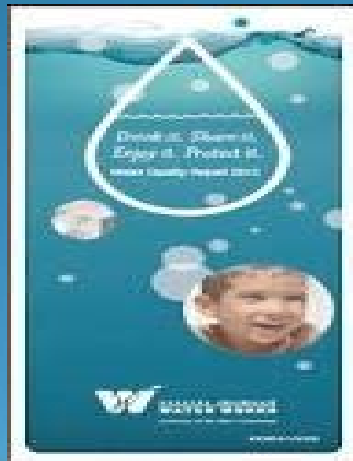
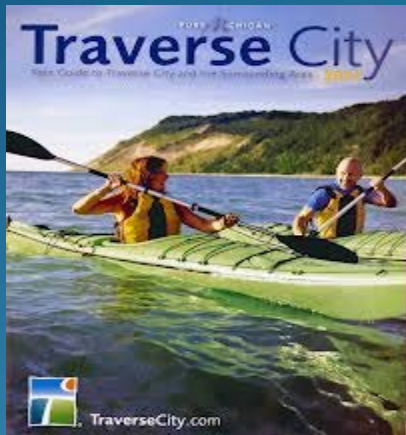
BROOKINGS

Macomb County Blue Economy Initiative: 32 miles of freshwater coast, largest freshwater estuary, boating, fishing, metro-parks, nautical mile, birding, blueway trails, Clinton watershed...Freshwater studies and problem solving (Macomb, St. Clair CC's and WSU)...firms finding new water technology products to make



BROOKINGS

Marquette, Duluth, Hamilton, Cincinnati, Pittsburgh, Cleveland, Traverse City, now Buffalo are “doing it” ...



Chicago and Toronto

Economic transformation can happen—both big historic manufacturing and trading capitals on the Great Lakes

Transforming to diverse, sustainable global cities with lots of ‘green and blue’



Lessons in Blue Economy-Building

Restore, Clean, Re-Connect to, and Celebrate Water

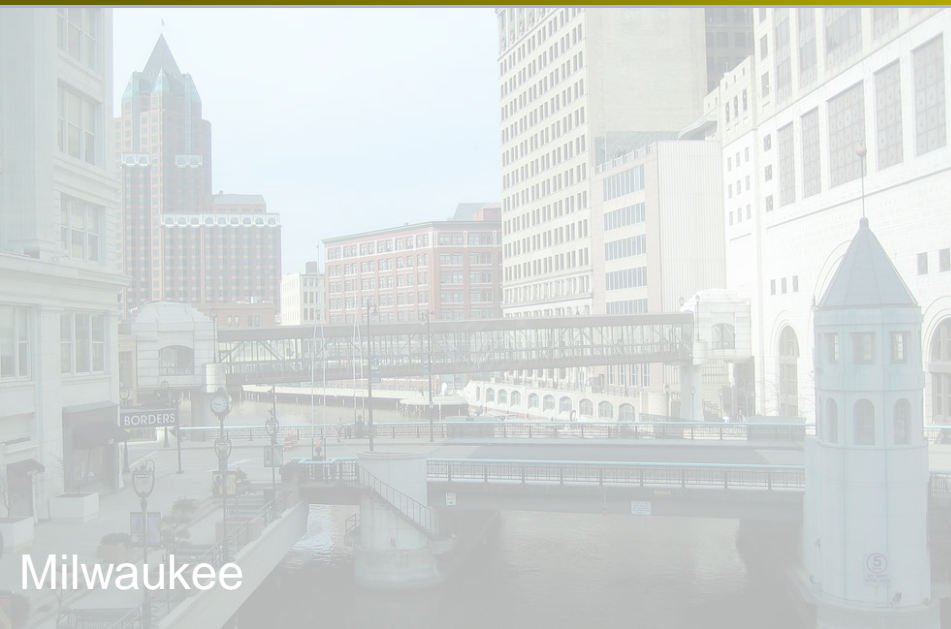
Leverage and Grow the Water Education, Research and Innovation Centers of Excellence and Activity

Support Businesses Growing Sustainable “Smart Water” Solutions – new products and services solving emerging global freshwater challenges

Embrace Values of Sustainable Water Use, Water Stewardship, Water Innovation- Sends message Great Lakes is the place where we care for our water, and are solving world’s water challenges.



Then Rust *will* become Blue





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