



WEDNESDAY NOVEMBER 18 | 9AM - 4PM | ARCHITECTURE EAST MAP AND POSTER GALLERY
WINNERS POSTED AT 3PM | RECEPTION TO FOLLOW

GEORGIA TECH'S CENTER FOR GIS AND STUDENT PLANNING ASSOCIATION PRESENT:

GIS DAY

MAP & POSTER

COMPETITION

SUBMIT GIS WORK FROM YOUR STUDIES OR RESEARCH TO THE GIS DAY MAP & POSTER COMPETITION!
THIS YEAR'S CONTEST IS OPEN TO ALL CURRENT STUDENTS AND ALUMNI.

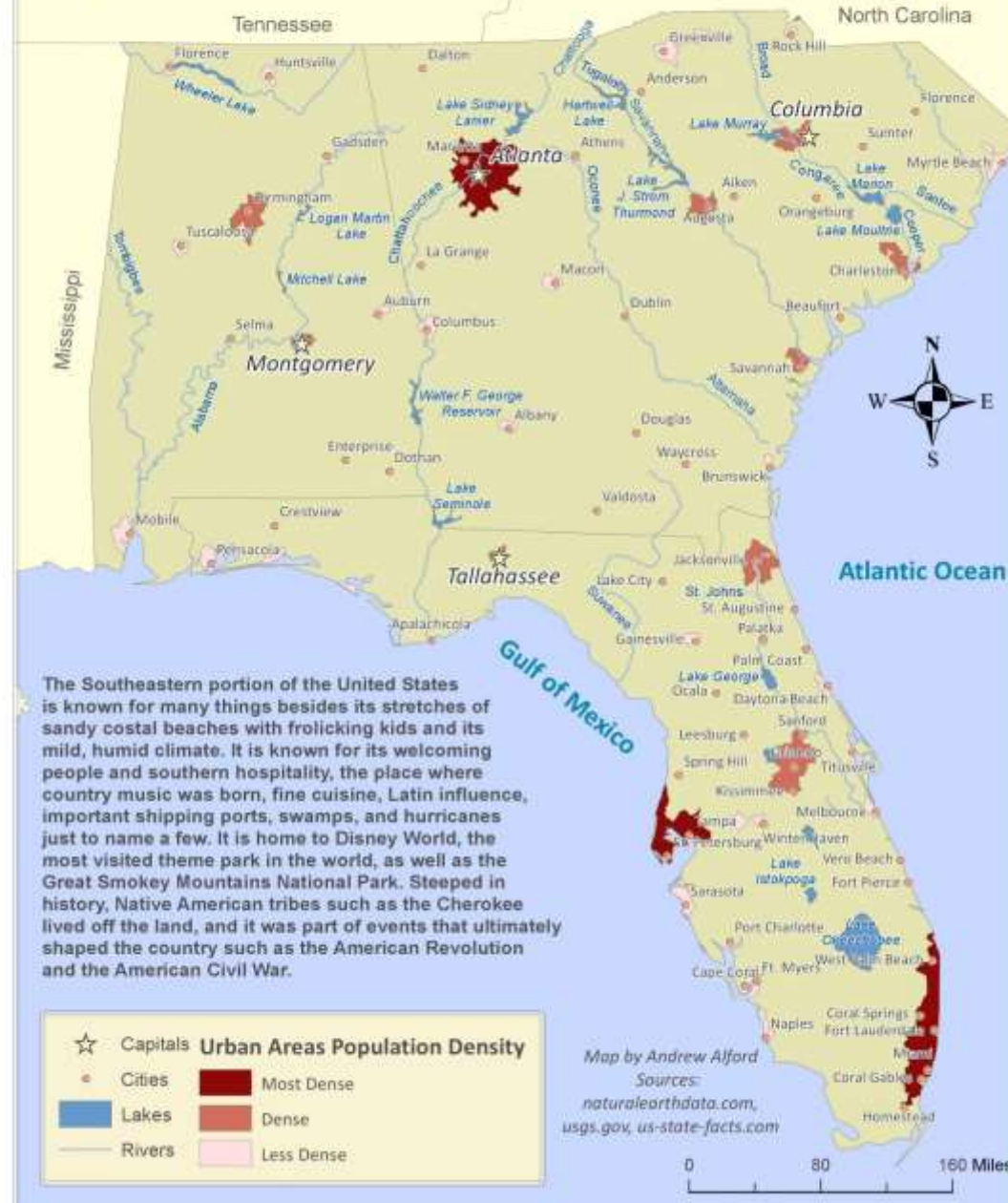
SUBMISSION GUIDELINES:

1. Please deliver printed submissions to Caroline Burnette or Chelsea Leitz by Nov. 16
2. Submissions should be no larger than 36" x 48" and no smaller than 17" (width or length)
3. For submissions with multiple authors, please list all contributors

Please contact Caroline Burnette at cburnette7@gatech.edu or Chelsea Leitz at cleitz@gatech.edu with any questions.



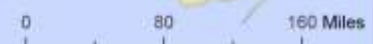
Southeastern United States



The Southeastern portion of the United States is known for many things besides its stretches of sandy coastal beaches with frolicking kids and its mild, humid climate. It is known for its welcoming people and southern hospitality, the place where country music was born, fine cuisine, Latin influence, important shipping ports, swamps, and hurricanes just to name a few. It is home to Disney World, the most visited theme park in the world, as well as the Great Smokey Mountains National Park. Steeped in history, Native American tribes such as the Cherokee lived off the land, and it was part of events that ultimately shaped the country such as the American Revolution and the American Civil War.

☆	Capitals	Urban Areas	Population Density
•	Cities	Most Dense	Dense
■	Lakes	Dense	Less Dense
—	Rivers	Less Dense	

Map by Andrew Alford
Sources:
naturalearthdata.com,
usgs.gov, us-state-facts.com



Denver, CO Metro Area



State Parks

Name	Area (Acres)
Golden Gate Canyon State Park	11906
Chatfield State Park	5830
Cherry Creek State Park	4411
Stamton State Park	3836
Roxborough State Park	3321
Barr Lake State Park	2768
Eldorado Canyon State Park	1360
Roxborough State Park	5

- State Parks
- Lakes
- Perennial Streams
- County Boundaries

Cities by Population (2010)

- ★ 401,000 - 600,000
- 251,000 - 400,000
- ▲ 100,000 - 250,000

Roads by Classification

- Interstate
- Freeways and Expressways
- Major Arterial



Park boundaries from the Colorado Division of Parks and Wildlife (2015)

Water feature data from USGS surveys (2014)

City Population data from the National Atlas of the United States (2010)

State and county boundary data from the US Census Bureau (2010)

Cartography by Jeremy Nichols for CEE4510, Print Map 1, 10/7/2015



Dominican Republic

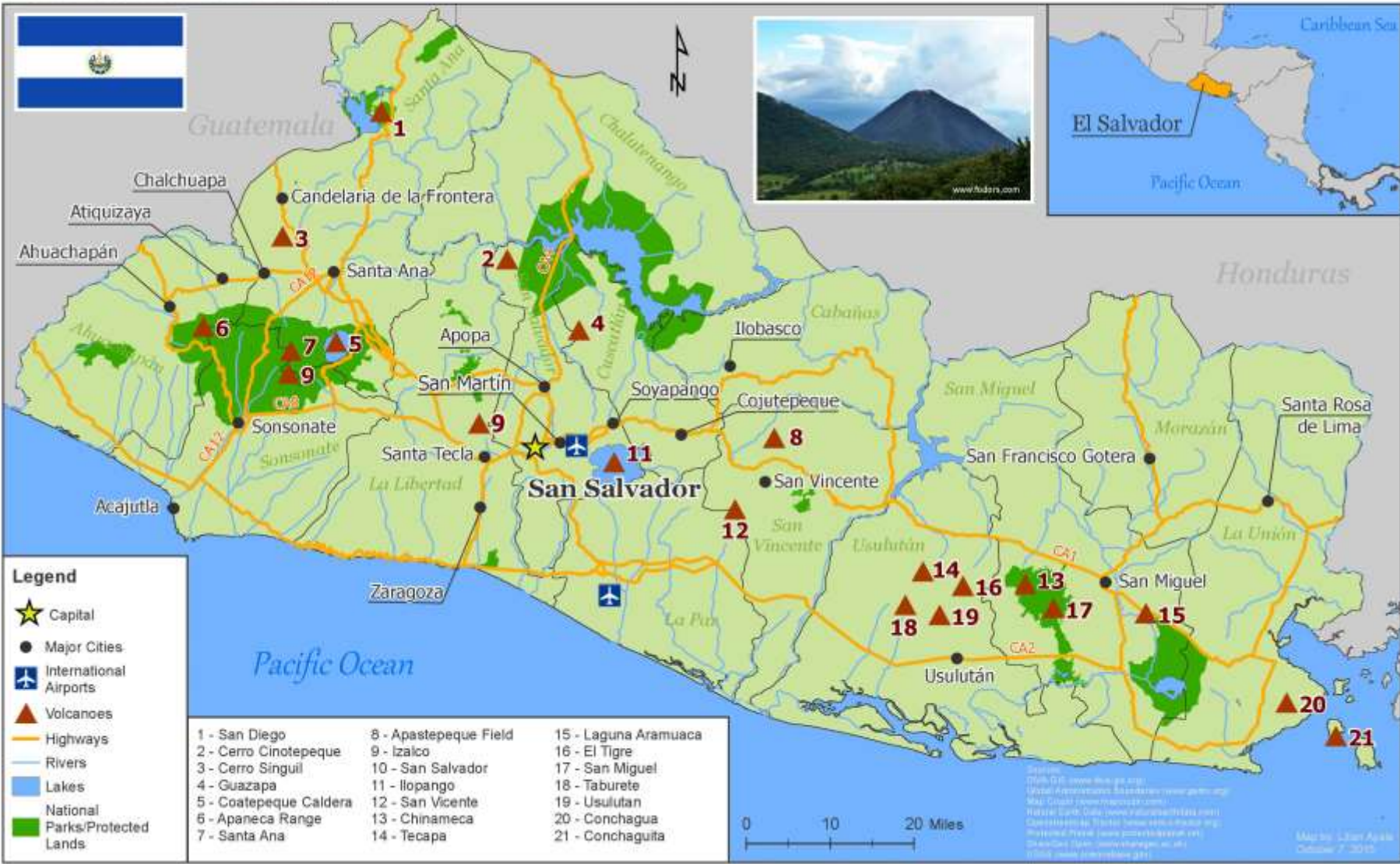
By: Caterina Selman
October 7th, 2015



El Salvador



Although it's near the size of Massachusetts, El Salvador contains many view points and cultural centers. El Salvador is made up of 14 departments. Within these departments, you'll find either a major city or scenic volcanoes. The 14 stratovolcanoes are major attractions for hikers. Coatepeque Caldera and Ilopango, are calderas formed after an eruption and now famously attract tourists for their picturesque landscapes. The volcanic fields, such as the Apastepeque Field, provided rich soils for coffee plantations. Though El Salvador has gone through a lot of violence in recent years even after the end of the civil war in 1992, there are still many features that attract tourists to El Salvador. Seen below are the volcanoes around El Salvador, major highways, major cities, and departments.



Florida's Critical Wildlife Areas Impacted by Harmful Algal Blooms



Legend

- ☆ Cities
- Critical Wildlife Areas
- Harmful Algal Bloom Events
- Major Rivers
- Farmland
- State Boundaries

Harmful algal blooms (HABs) are defined as the proliferation of toxic algal species that negatively impact the health of wildlife and humans. Critical Wildlife Areas (CWA) inhabited by sensitive and endangered species are especially prone to the adverse effects of HABs. Observations of HAB outbreaks are being reported with increasing frequency along U.S. coastlines, causing growing concerns nationwide.

Studies have shown a strong correlation between excess nutrient runoff from agricultural areas and HABs incidents through their connecting drainage areas. The western coast of Florida in particular, which consists predominantly of farmland, continues to be a growing area of concern for its CWA's due to the area's frequent and large outbreaks of HABs.

Sources: MGIS Data USA State Boundaries; Florida Fish & Wildlife Conservation Commission; National Oceanic & Atmospheric Administration



Australia Roads, Sea Ports, and Airports



"The Land Down Under"

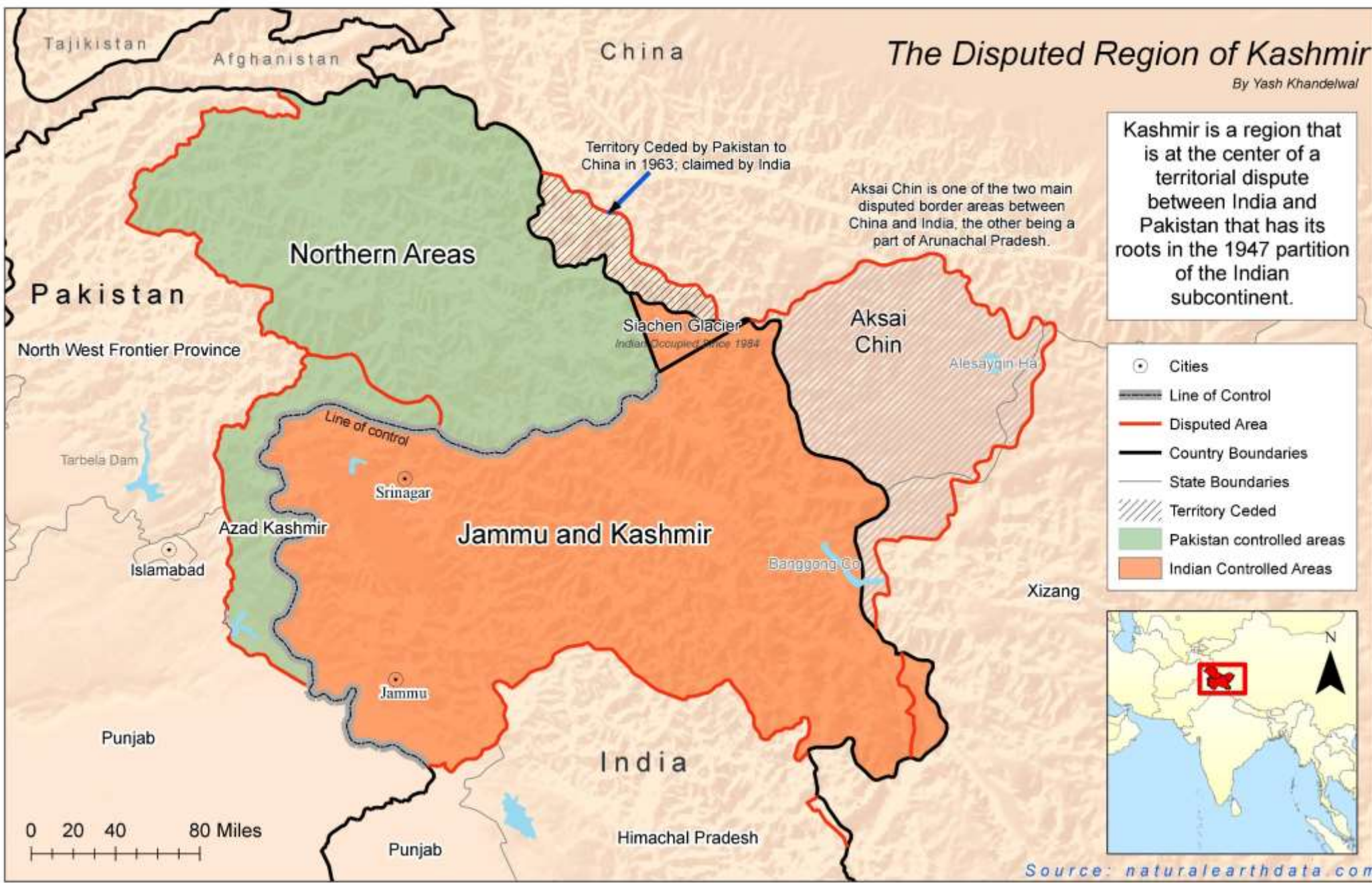
The Disputed Region of Kashmir

By Yash Khandelwal

Kashmir is a region that is at the center of a territorial dispute between India and Pakistan that has its roots in the 1947 partition of the Indian subcontinent.

Aksai Chin is one of the two main disputed border areas between China and India, the other being a part of Arunachal Pradesh.

Territory Ceded by Pakistan to China in 1963; claimed by India



- Cities
- ▬ Line of Control
- Disputed Area
- ▬ Country Boundaries
- State Boundaries
- ▨ Territory Ceded
- Pakistan controlled areas
- Indian Controlled Areas



Source: naturalearthdata.com

Scenic Highways, Vista Points and National Parks in California

Map by Kimber Guan

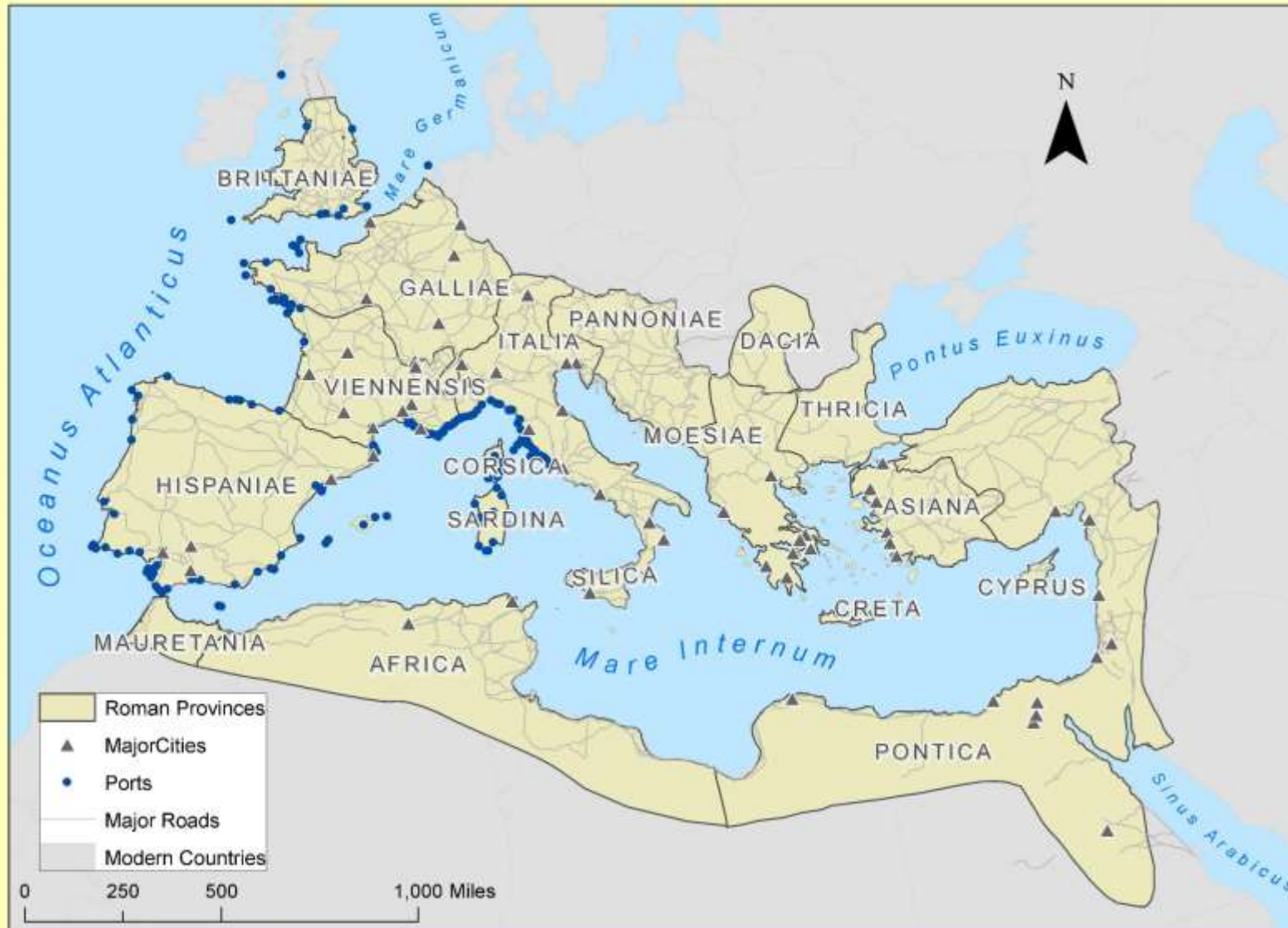


- ★ Vista Point
- ▲ City
- Interstates
- Scenic Highways
- Lakes
- National Park

Notes:
 The State Route Highway System includes a lot of highways that are either eligible for designation as scenic highways or have been officially designated. The Vista Points are mapped by California Division of Motorways to provide locations where motorists can safely view scenery in parks and other scenic areas. Some points may have facilities including restrooms, picnic areas, campgrounds, and other recreational facilities that are accessible to all persons.

Data Source:
 California Department of Transportation - California GIS Data
 California Geospatial

The Height of the Roman Empire



The Roman Empire reached the shown extent under Emperor Trajan in 117 AD, and maintained this area until approximately 350 AD

The Roman Empire was among the most powerful economic, cultural, political and military forces in the world of its time. It was the largest empire of the classical antiquity period, and one of the largest empires in world history. At its height under Trajan, it covered 5 million square kilometers and held sway over some 70 million people, at that time 21% of the world's entire population. The longevity and vast extent of the Empire ensured the lasting influence of Latin and Greek language, culture, religion, inventions, architecture, philosophy, law and forms of government on the Empire's descendants.

From Wikipedia:Roman Empire

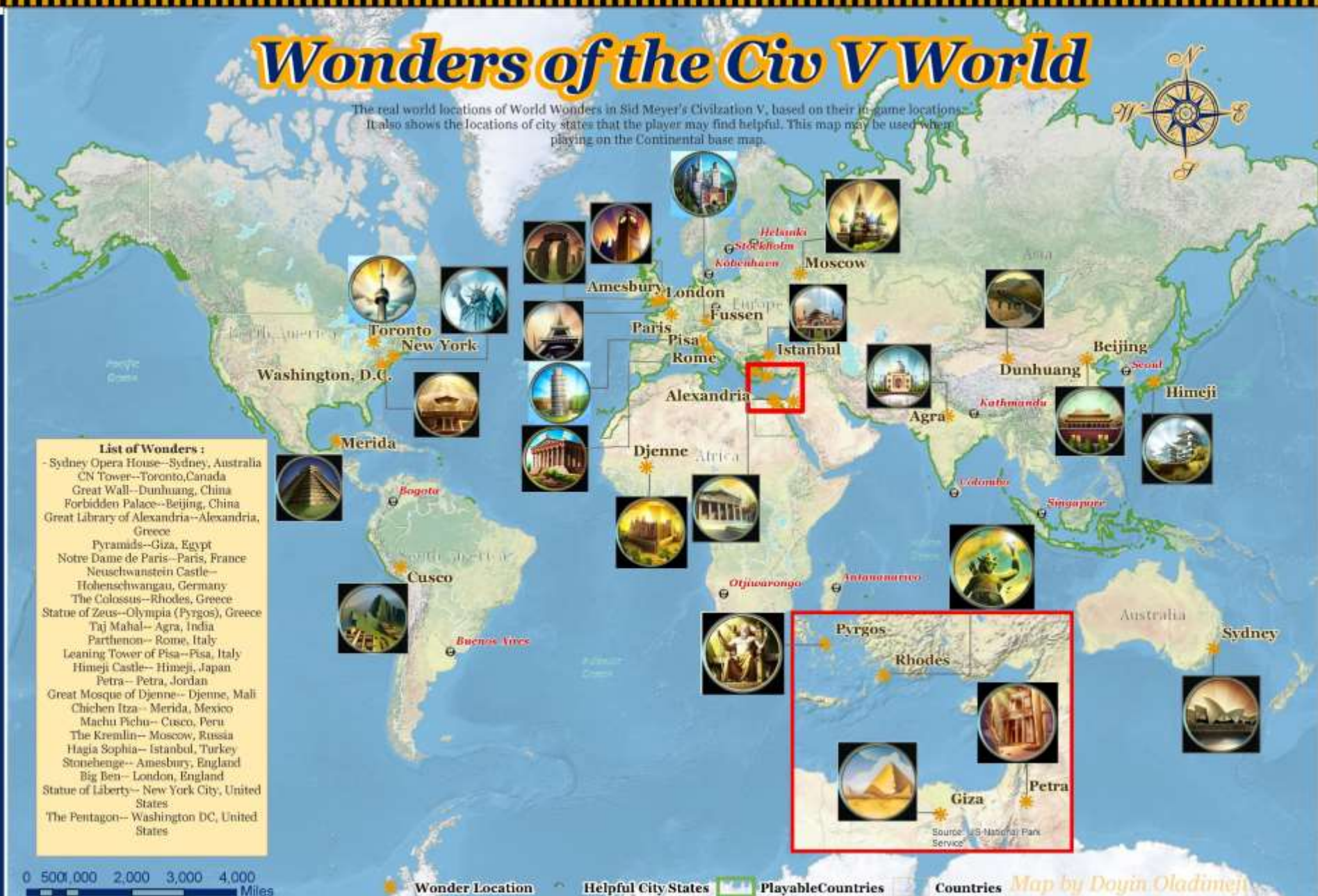


Wonders of the Civ V World

The real world locations of World Wonders in Sid Meyer's Civilization V, based on their in-game locations. It also shows the locations of city states that the player may find helpful. This map may be used when playing on the Continental base map.



- List of Wonders :**
- Sydney Opera House--Sydney, Australia
 - CN Tower--Toronto, Canada
 - Great Wall--Dunhuang, China
 - Forbidden Palace--Beijing, China
 - Great Library of Alexandria--Alexandria, Greece
 - Pyramids--Giza, Egypt
 - Notre Dame de Paris--Paris, France
 - Neuschwanstein Castle--Hohenschwangau, Germany
 - The Colossus--Rhodes, Greece
 - Statue of Zeus--Olympia (Pyrgos), Greece
 - Taj Mahal--Agra, India
 - Parthenon--Rome, Italy
 - Leaning Tower of Pisa--Pisa, Italy
 - Himeji Castle--Himeji, Japan
 - Petra--Petra, Jordan
 - Great Mosque of Djenné--Djenné, Mali
 - Chichen Itza--Merida, Mexico
 - Machu Pichu--Cusco, Peru
 - The Kremlin--Moscow, Russia
 - Hagia Sophia--Istanbul, Turkey
 - Stonehenge--Amesbury, England
 - Big Ben--London, England
 - Statue of Liberty--New York City, United States
 - The Pentagon--Washington DC, United States



0 500 1,000 2,000 3,000 4,000 Miles

★ Wonder Location
 ★ Helpful City States
 Playable Countries
 Countries

Map by Doyin Oladimeji

Source: US National Park Service. Sources: Esri, DeLorme, USGS, NPS



The United Arab Emirates and its neighbouring territories



- ★ Capital City
- Major Cities
- ✕ Airports
- UAE Provinces
- Countries
- Roads

YOSEMITE NATIONAL PARK



Yosemite National Park is located in the central eastern portion of the state of California. Yosemite was one of the first areas to come under protection of the federal government from development, paving the way for the future establishment of the national park system. Approximately 95% of the park is designated wilderness, with the majority of visitors spending their time in the Yosemite Valley. Formed by glaciers, the valley boasts gorgeous granite rock formations and waterfalls. The map to the right shows an overview of the entire park, including roads, rivers and lakes. Also noted on the map are four of the more notable sites in the Yosemite Valley, with pictures of each shown below for reference.



(1) El Capitan



(2) Bridalveil Falls

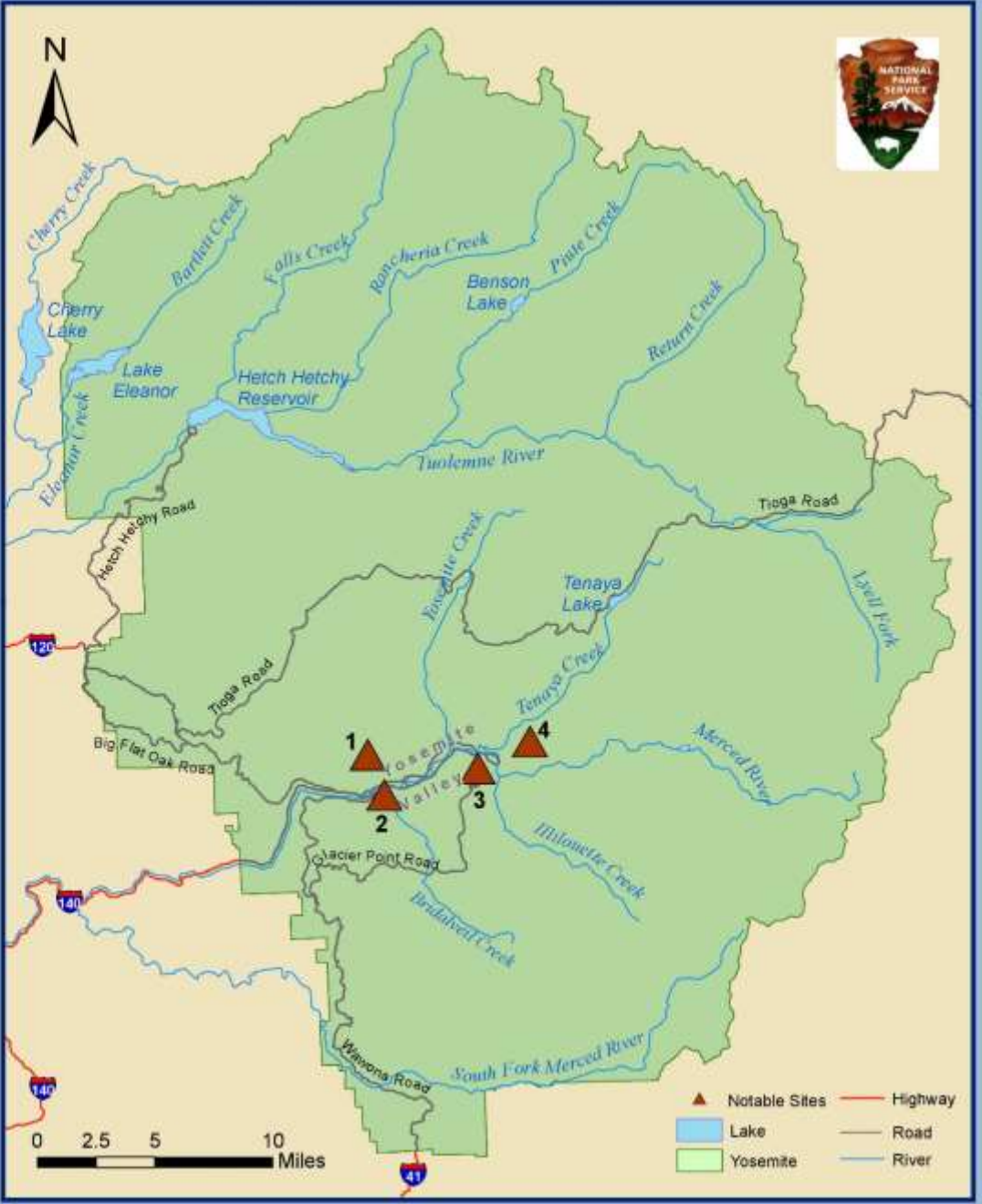


(3) Glacier Point

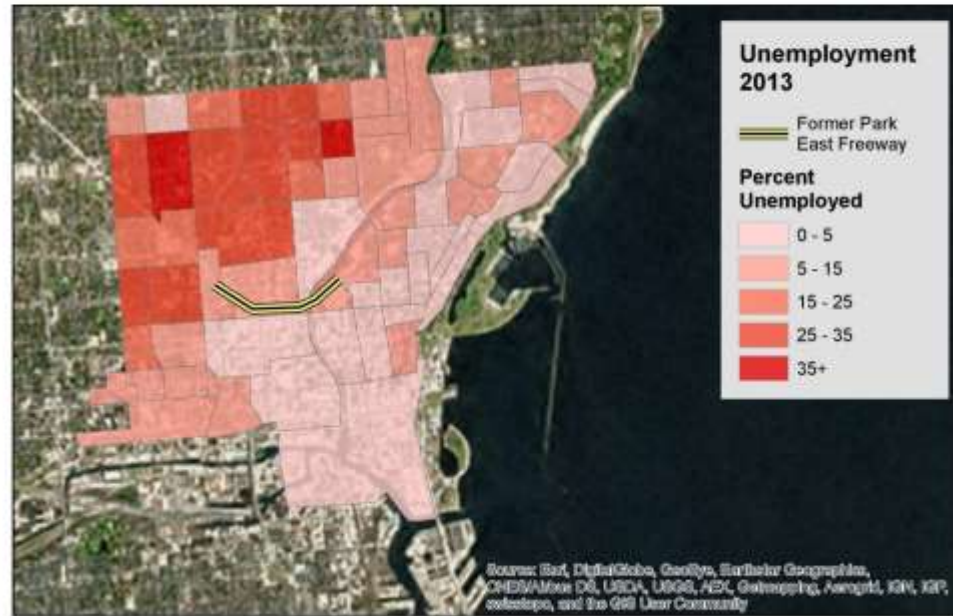
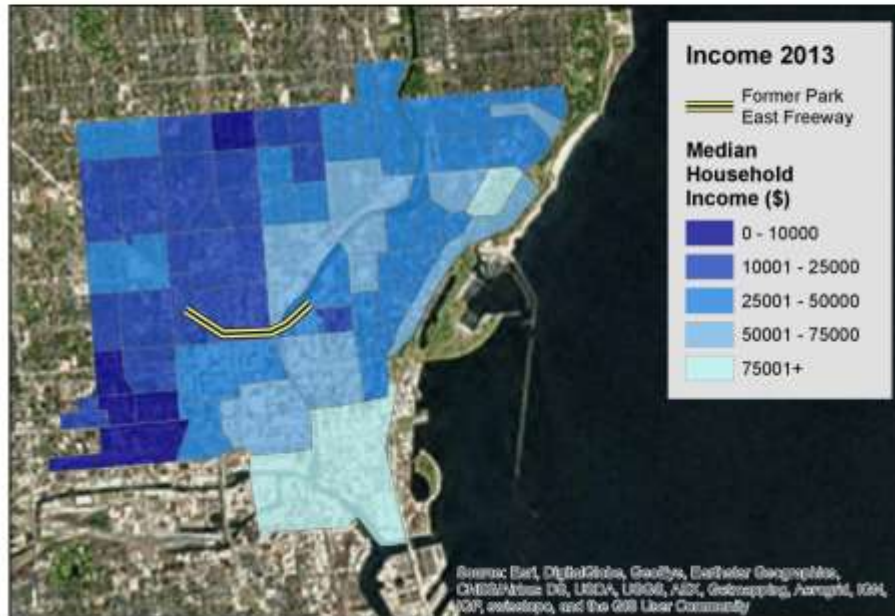
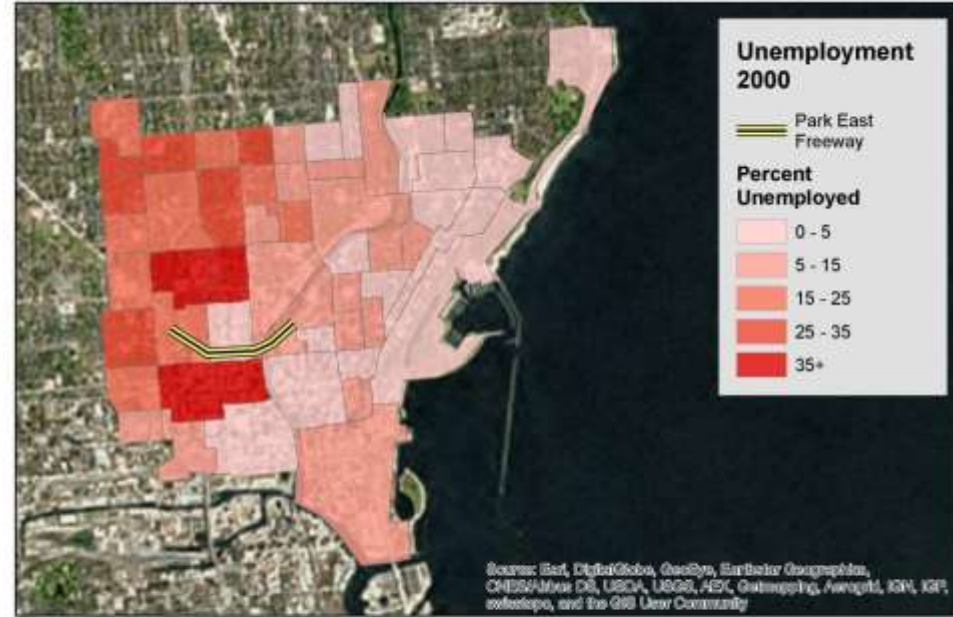
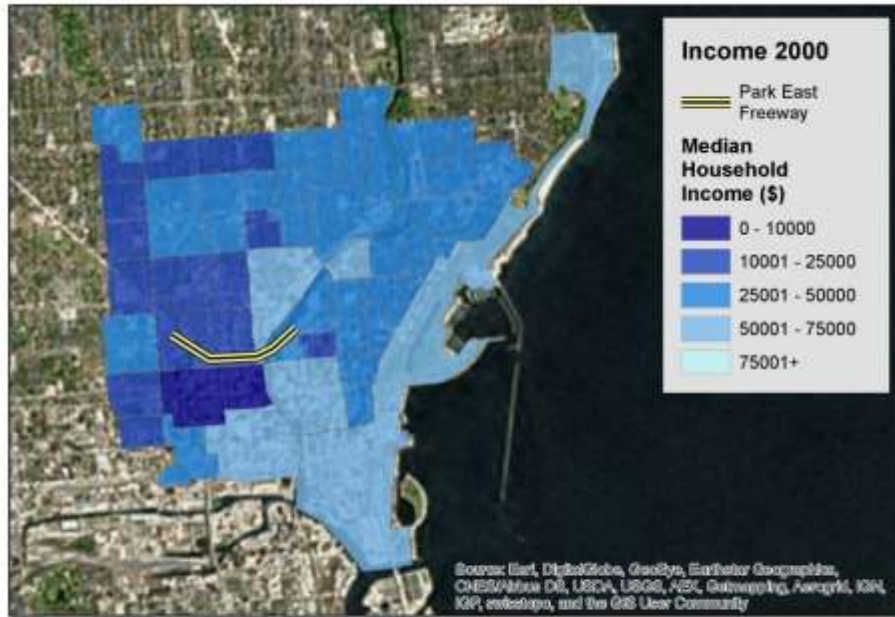


(4) Half Dome

Map by Emily Flood
 October 7th, 2015
 Base Map: ArcGIS Online (USA States (Generalized))
 River data: ArcGIS Online (USA Detailed Streams)
 Attractions, Lakes & Roads data: National Park Service, U.S. Department of the Interior - IRMA Portal



Milwaukee Park East Freeway Removal



Capturing Metro Atlanta's Food Environment: A Community Level Assessment of Three Disparate Areas

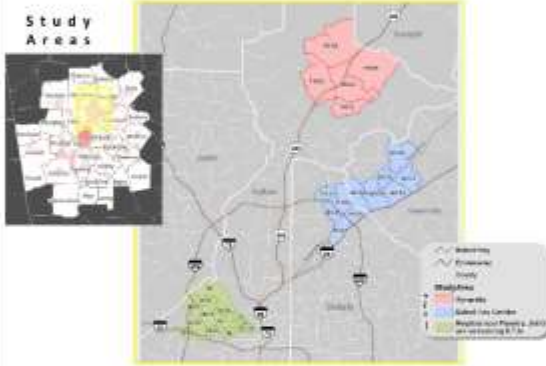
Vanhilal Lisa Douangchai, CFM, GISP

Abstract:

Increasing concern about sustainability, food sourcing (local vs. distant), environmental equity, diabetes and obesity, and genetically modified foods are paralleled by an increased awareness of food deserts, areas that lack "accessible" food establishments that offer "affordable" healthy and nutritious food options. Open source data and tools can help community leaders and decision makers evaluate and develop plans and policies to help ensure accessibility to healthy food options for residents. The USDA's Food Environment Atlas provides county level information to help identify food deserts. However, a more detailed level of analysis will reveal an even clearer picture of the local food environment to help decision makers and community leaders make more impactful decisions to develop plans that directly affect local residents.

This poster illustrates the approach taken to examine the food environment of three disparate communities in Metro Atlanta—the City of Alpharetta, a portion of the Buford Hwy corridor, and NPU-G along with portions of its surrounding NPUs. Which community is most vulnerable to their food environment? Although people's eating habits are a matter of choice and cultural taste, the food environment plays a significant role in the options that are available to influence people's choices.

Study Areas



Methodology:

The **Retail Food Environment Index** developed by the California Center for Public Health Advocacy and the **Food Balance Score** developed by Mari Gallagher Research and Consulting Group were applied to the three areas of interest to measure accessibility to healthy, nutritious food options. Point centroids were generated for residential parcels within the study areas and representative samples were acquired by running a random sample script. The random samples were used in the calculation of the food balance scores for each census tract. The results of the RFEI and food balance scores were analyzed in conjunction with existing infrastructure, demographic, and socioeconomic data in order to fully understand the local food landscape. The data included race, ethnicity, school age children, the elderly population, income, poverty rate, vehicle accessibility, and transit locations.

$$RFEI = \frac{\# \text{ of fast food} + \# \text{ of convenience stores}}{\# \text{ of supermarkets} + \# \text{ of farmers markets}}$$

FOOD BALANCE THEORY

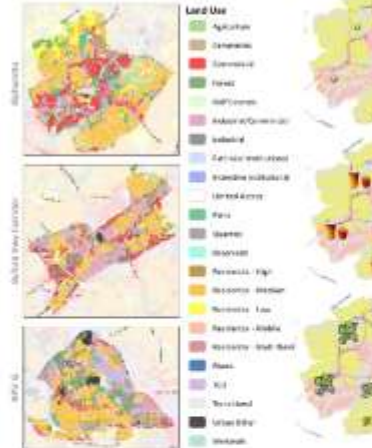
FOOD BALANCE SCORE	EXAMPLES
Extremely Higher than 1: Worst Outcome	Mainstream grocery is 2 miles away and fringe fast food venue is 1 mile away
Close to 1: Near to Balance	Mainstream grocery is 1 mile away and fringe fast food venue is 1 mile away
Extremely Below 1: Best Outcome	Mainstream grocery is 1 mile away and fringe fast food venue is 2 miles away

DEFINITIONS
Mainstream grocery: "full service" establishments that sell products that are considered to be a well-balanced diet on a continuous basis as well as unhealthy products, particularly processed foods.
Fringe fast food venue: store that does not sell an assortment of products to allow consumers to meet their daily recommended nutrient intake.

Source: Figure adapted from Mari Gallagher Research & Consulting Group, Food Environment: The Impact of Food Deserts on Public Health in Chicago, 2006, Figure 12.

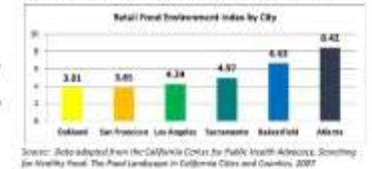
Data:

- ✓ Retail Locations - ReferenceUSA
- ✓ Transportation and Land Use - Atlanta Regional Commission
- ✓ Demographics - US Census Bureau



Community	Total Population	Median Household Income	% of population 65+	% of population 18-24	% of population 18-24 with a car	% of population with a car
Alpharetta	14,710	72,941	10.0%	17.0%	85%	85%
Buford Hwy Corridor	18,400	61,141	10.4%	18.0%	84%	84%
NPU-G	21,200	50,242	12.0%	22.0%	82%	82%

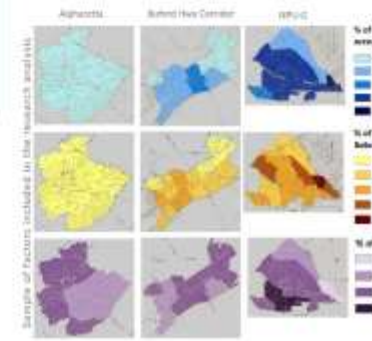
Comparison of Atlanta's RFEI Score with Five California Cities



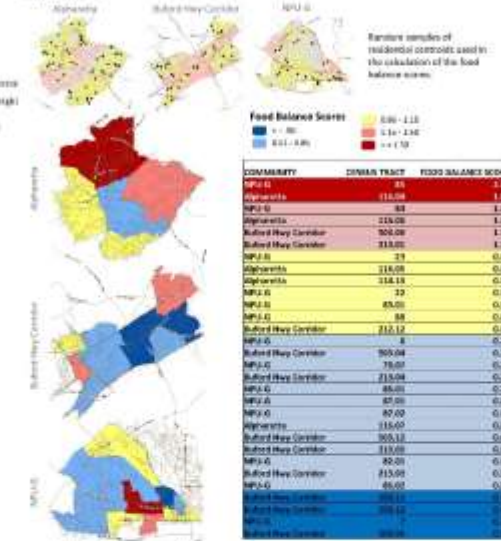
Summer food establishments depicted by graduated symbols



Distribution of Various Food Establishments within All Three Communities and Metro Atlanta



Results:



Retail Food Environment Index



Conclusion:

1. The RFEI and Food Balance Score are good indicators of determining the existence of an imbalanced food environment. However, additional data must be examined in conjunction with these indicators in order to get a more robust understanding of the factors that may influence people's eating habits.
2. The USDA's Food Environment Atlas is a good tool for analysis at the state, regional, and county level. However, zooming in further at the local level provides more insightful information about the local food landscape.
3. Although the northern section of Alpharetta has a poor food balance score, factors such as the existing infrastructure, demographics, and socioeconomic characteristics must be considered.
4. NPU-G residents are most vulnerable to their food environment and may benefit from policies and incentives that attract businesses that sell fresh produce at "affordable" prices and that encourage targeted outreach programs.
5. Other factors should be investigated and included in future research, such as local health, population of registered food assistance program participants, and results from a food basket survey and a physical activity survey.

Acknowledgements:

Thank you to Dr. Steven French for his generous assistance with this research and to Georgia Tech for providing access to private data.



Spanish Teams in the 2015-2016 UEFA Champions League



Spain is the first country in the history of the UEFA Champions League to have five teams competing. Since Barcelona already qualified for the group stage (as the champions of the 2014-15 La Liga), the berth in the group stage is given to the Europa League title holders, Sevilla

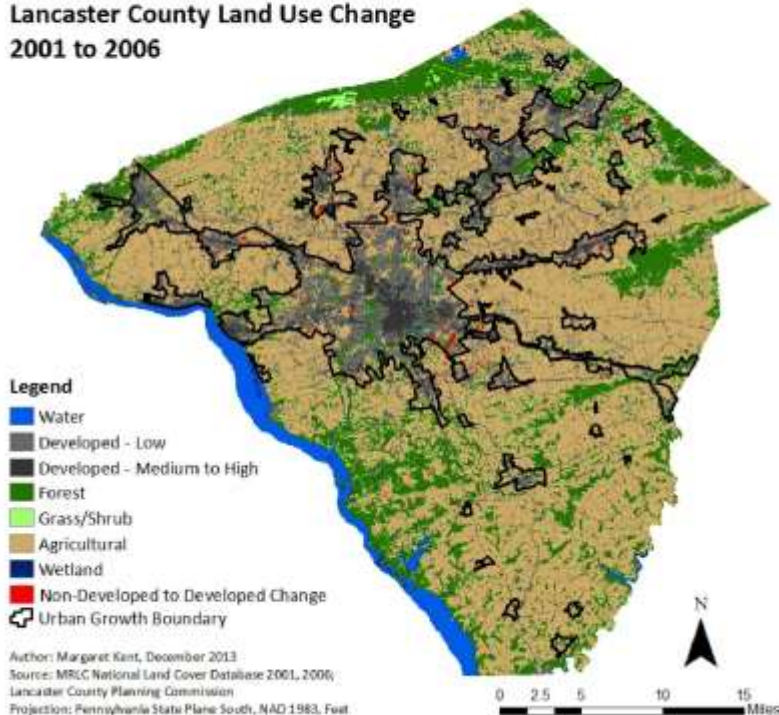


- ★ Team Cities
- Province Capitals
- ★ Major Stadiums in Madrid
- Madrid
- Autonomous Communities
- Lakes
- Major Rivers

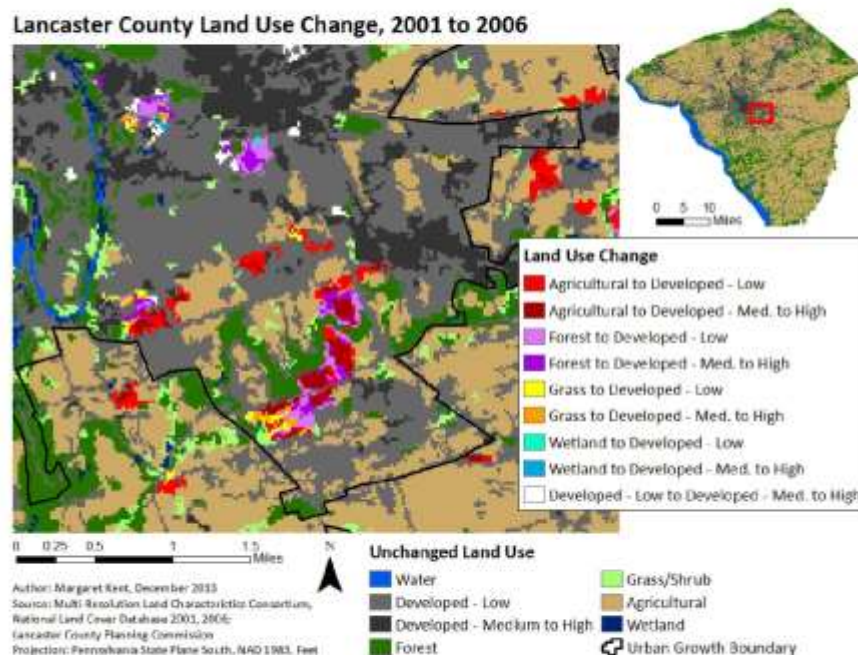
Maintaining an Urban/Rural Divide:

Land Use Change Inside and Outside of Urban Growth Boundaries in Lancaster County, Pennsylvania

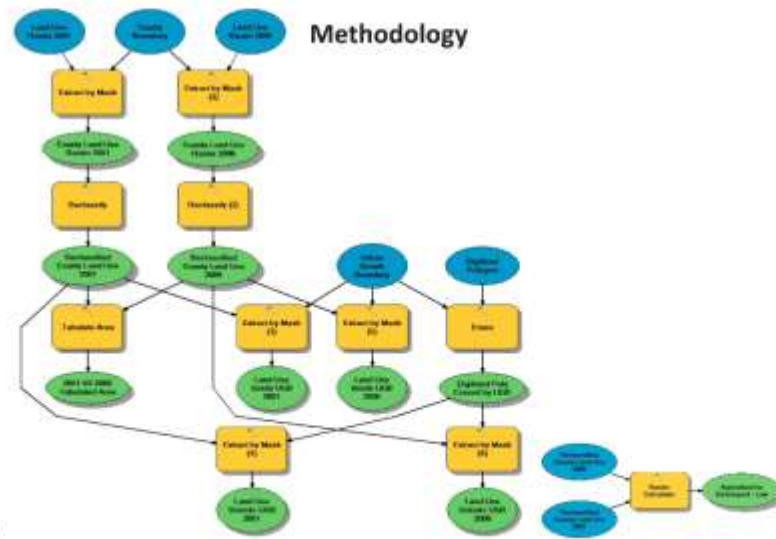
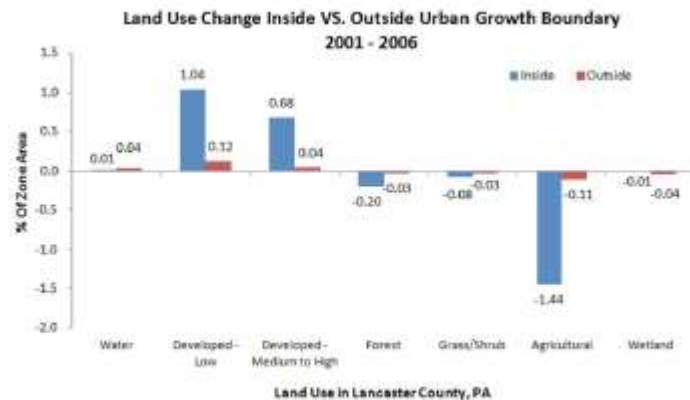
Lancaster County Land Use Change 2001 to 2006



Lancaster County Land Use Change, 2001 to 2006



Most New Development Has Occurred Inside the Urban Growth Boundaries



By: Margaret Kent