

Story Telling with Maps

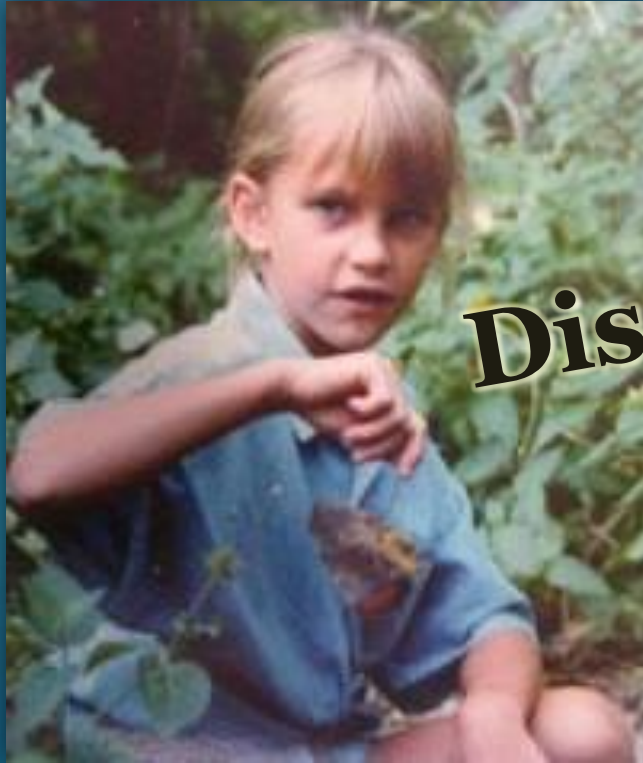
Jennifer Anne Lentz, Ph.D.

Marine Science Fellow at the Aquarium of the Pacific
Boeing Teacher Institute (BTI) Presentation

August 1st, 2013



My Background



Discover

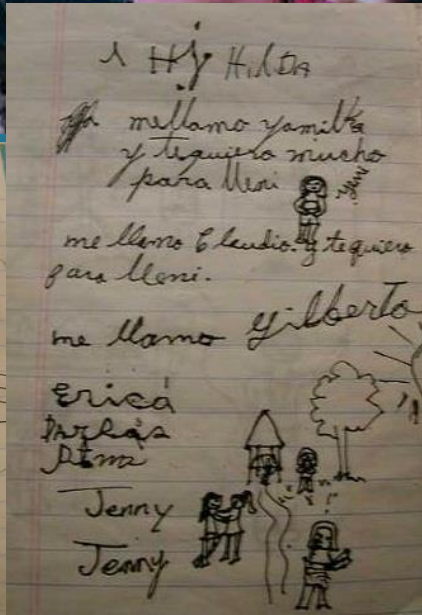
Wonder

Learn

Explore



My Background



My Background

Bachelor of Arts (BA) degree from **Hamilton College**
with an Interdisciplinary Concentration in Environmental Studies

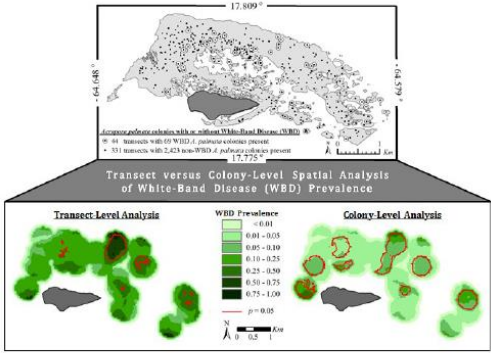


My Background

Ph.D. from **LSU's** Department of Oceanography and Coastal Sciences with a GIS Minor

A Dissertation Defense
Department of Oceanography and Coastal Sciences

Developing a Geospatial Protocol For Coral Epizootiology



Transect versus Colony-Level Spatial Analysis of White-Band Disease (WBD) Prevalence

WBD Prevalence

0.00 - 0.05
0.05 - 0.10
0.10 - 0.25
0.25 - 0.50
0.50 - 0.75
0.75 - 1.00

$p = 0.05$

by
Jennifer Anne Lentz
B.A., Hamilton College, 2005

Thursday, March 29th, 2012 at 1:00pm

Dalton J. Woods Auditorium
Energy, Coast, and Environment Building
Louisiana State University, Baton Rouge, Louisiana



My Background

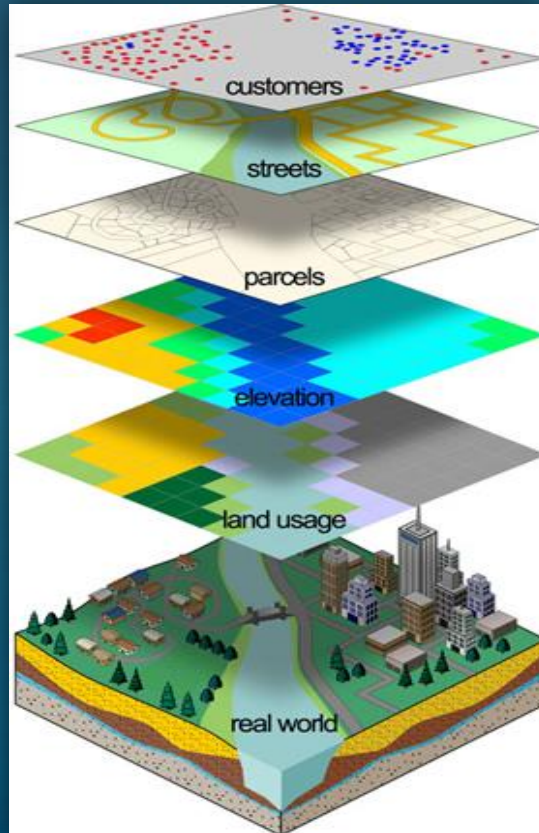
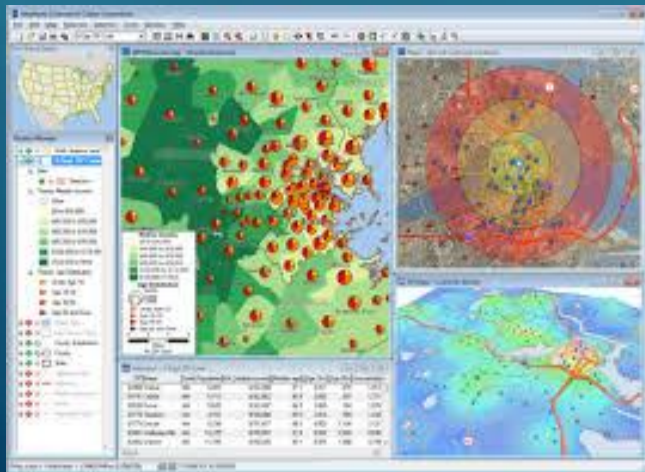
“Marine Science Fellow” at the Aquarium of the Pacific



Geographic Information Systems



Spatial Analysis



Remote Sensing



GIS Applications

Crime Analysis

CRIMES LEGEND MAP AIR PHOTO

Select a crime type to update the map. **Crime Definitions**

- (0) Homicide
- (0) Sex A
- (0)

8TH ST
G ST
Gallery Pl-Chinatown
Gallery Pl-Chinatown
8TH ST

Ecologic & Climate Science

ClimateWizard
www.climatewizard.org

The Nature Conservancy
Protecting nature. Preserving life.

UNIVERSITY OF WASHINGTON
KASTRUP MUSEUM

About Us FAQs Contact Us

Analysis Area Time Period Map Options Measurement Resources

United States Global
Global

Time Period
 Past 50 Years
 Mid Century (2050s)
 End Century (2080s)

Map Options
 Map of Average
 Map of Change
Compare 2 Average Models

Measurement
 Average Temperature
 Precipitation
Annual

Resources
[Case Studies](#)
[Documentation](#)
Data and Data Issues Download
ClimateWizard Custom Analysis
Climate Wizard Version

Future Climate Model
IPCC Fourth Assessment
Emission Scenario
High A2
General Circulation Model
Constant Average

Change in Annual Precipitation by the 2080s
Model: Ensemble Average, SRES emission scenario: A2

Change Transparency
Get Values

Factors
 Top
 World

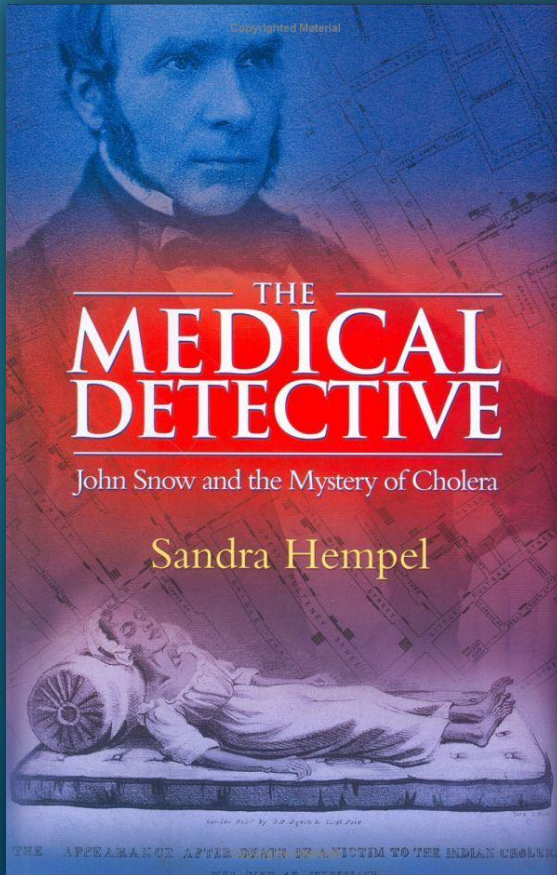
2080: This map shows the precipitation change projected by the middle model. Areas that are blue are projected to increase by at least half of the model, and areas that are yellow to red are projected to decrease in precipitation by at least half of the model.

Medical Geography & Spatial Epidemiology



Dr. John Snow (1813-1858)

“Father of **Modern Epidemiology**”



ST. JAMES, WESTMINSTER.

The GOVERNORS and DIRECTORS of the POOR
HEREBY GIVE NOTICE,
That, with the view of affording prompt and Gratuitous assistance to Poor Persons resident in this Parish, affected with Bowel Complaints and

CHOLERA,

The following Medical Gentlemen are appointed, either of whom may be immediately applied to for Medicine and Attendance, on the occurrence of those Complaints, viz.—

Mr. FRENCH, 41, Gt. Marlborough St.
(Opposite, Bow's Court, Mansell Street)

Mr. HOUSLEY, 28, Broad Street.

Mr. WILSON, 16, Great Ryder St.

Mr. JAMES, - 49, Princes Street.

Mr. DAVIES, 25, Brewer Street.

SUGGESTIONS AS TO FOOD, CLOTHING, &c.

Regularity in the Hours of taking Meals, which should consist of any description of wholesome Food, with the moderate use of sound Beer.

Abstinence from Spirituous Liquors.

Warm Clothing and Cleanliness of Person.

The avoidance of unnecessary exposure to Cold and Wet, and the wearing of Damp Clothes, or Wet Shoes.

Regularity in obtaining sufficient Rest and Sleep.

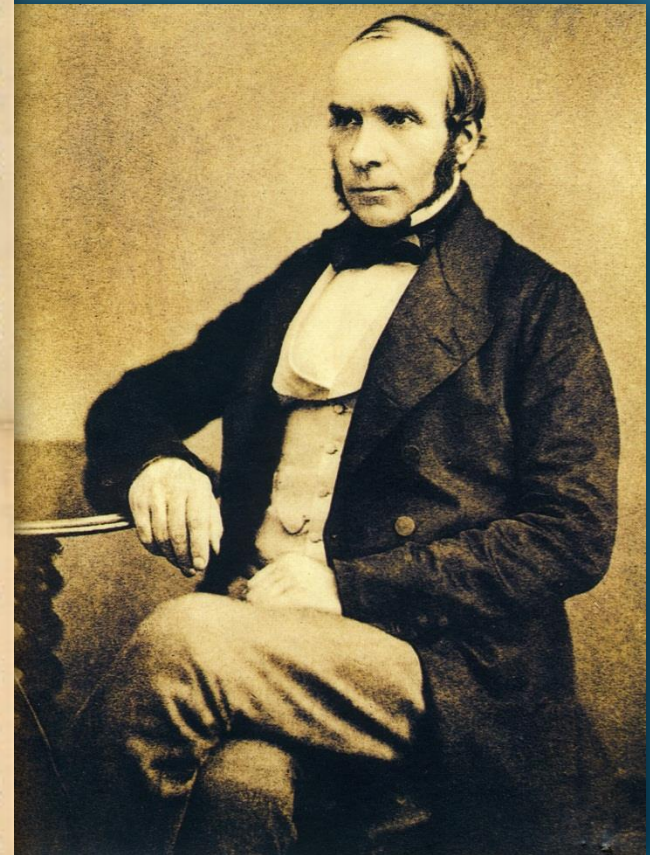
Cleanliness of Rooms, which should be aired by opening the Windows in the middle of each day.

By Order of the Board,
GEORGE BUZZARD,
Clerk.

FRENCH'S OFFICE, Palace Street,
20th November, 1831.

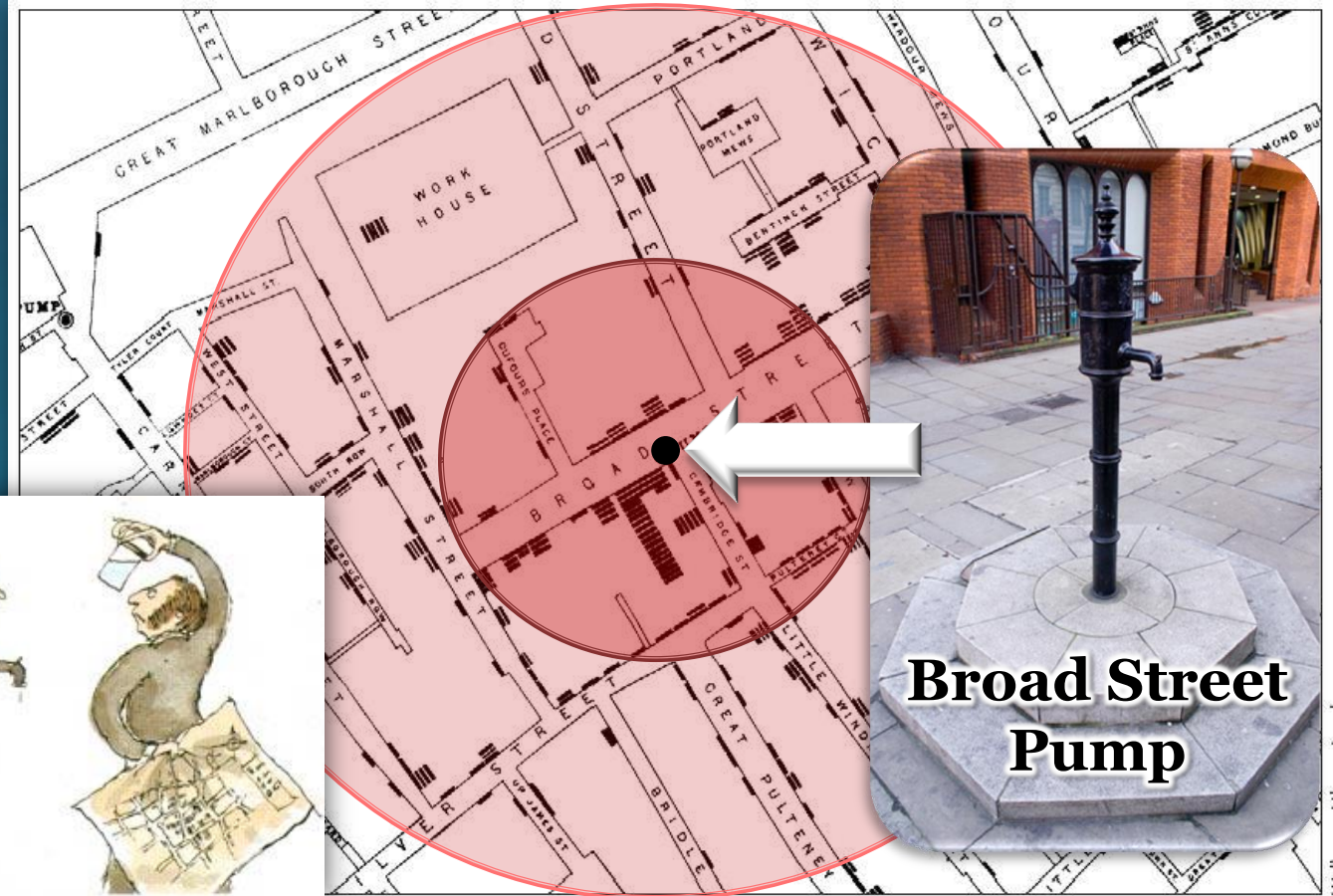
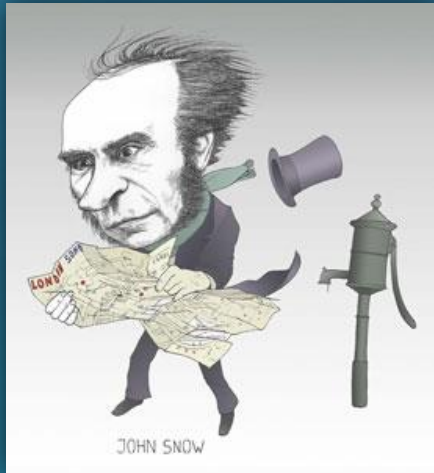
It is requested that this Paper be taken care of, and placed where it can be easily referred to.

PRINTED BY J. JOHNSON, ST. PAULS CHURCH-YARD, LONDON.



Dr. John Snow (1813-1858)

“Father of **Medical Geography**”



Street map of cholera deaths in Soho in 1853 from John Snow's *On the Mode of Communication of Cholera*

Home Range & Habitat Use

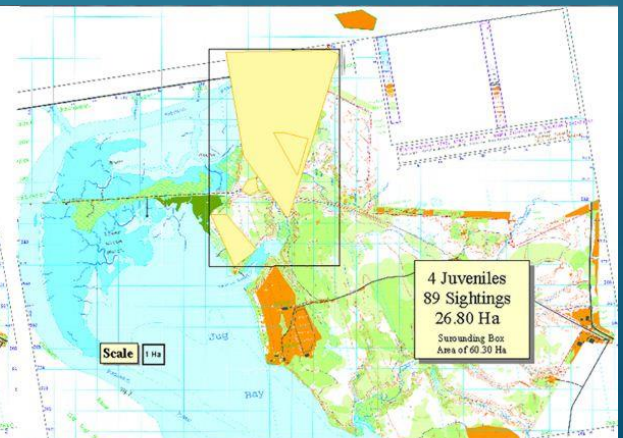
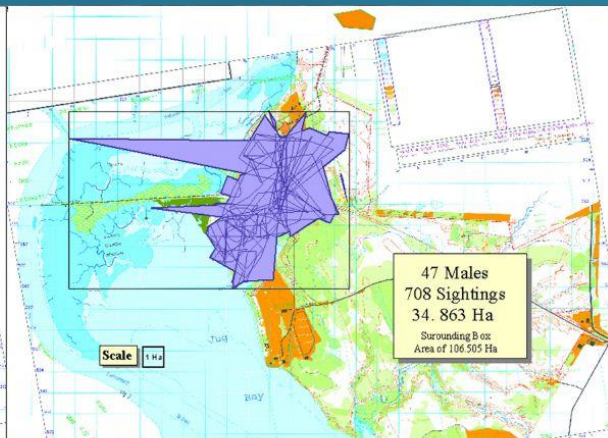
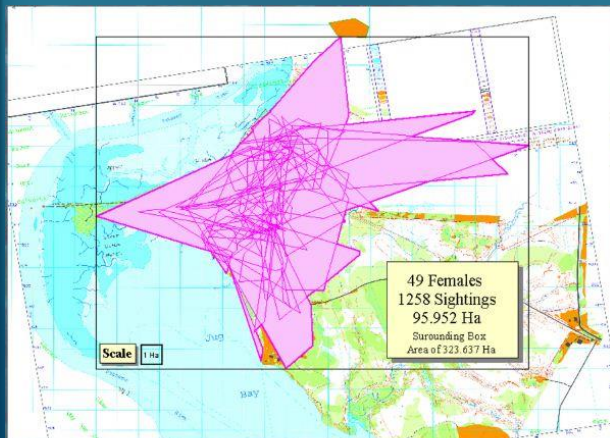
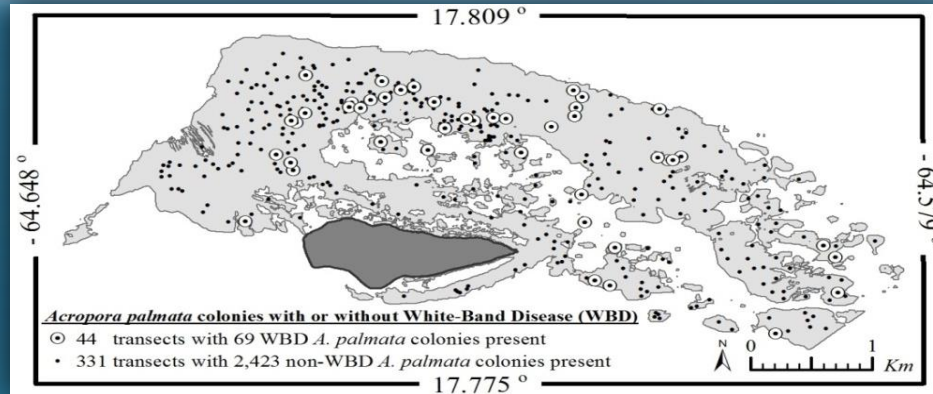
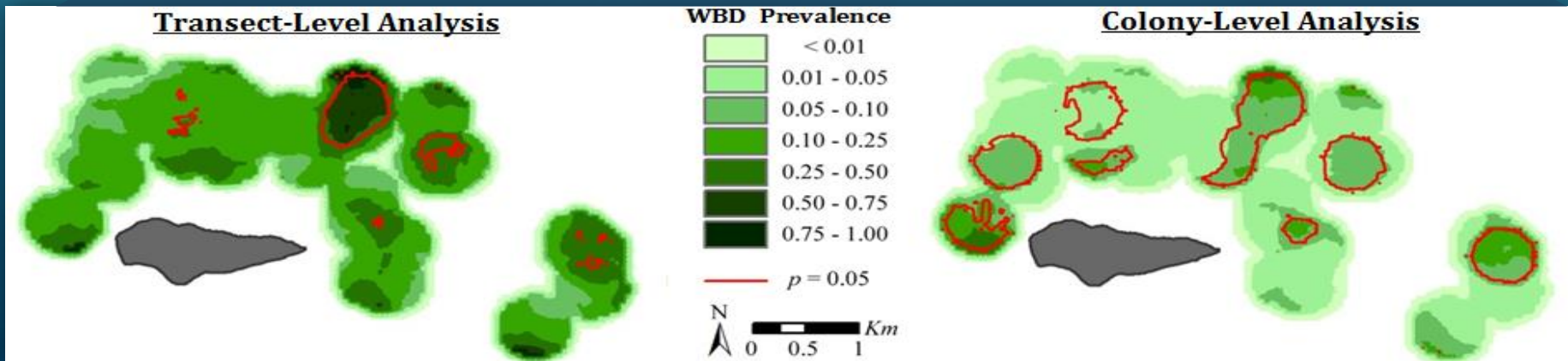


Fig. 6. Combined home ranges based on the Minimum Convex Polygon method. The home range of each individual turtle is depicted as a thin lined polygon; the total area used by each gender is depicted by a thick lined, shaded polygon.

Coral Reef Diseases



Transect versus Colony-Level Spatial Analysis of White-Band Disease (WBD) Prevalence



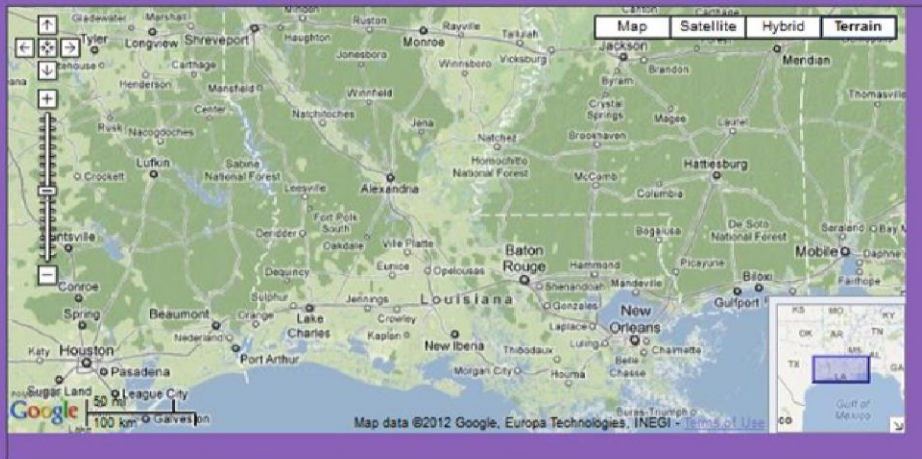
SC&E Research Website

LSU's School of the Coast & Environment (SC&E) Research Projects

Quick Search

[Advanced Search](#)

Display Options:



View Additional Layers

- Bathymetry
- LDWF Artificial Reef Planning Areas
- Louisiana Marsh Types
- Marine Protected Areas (MPAs)
- Minerals Management Service (MMS) Boundaries
- Oil Platforms
- U.S. National Parks
- U.S. County (or Parish) Names & Boundaries
- U.S. State Names & Borders

Summarize by:

- Parish (for Louisiana Studies)
- State (for US Studies)
- Country
- Don't Summarize

Limit the Information displayed in the Table below to: Faculty-Staff (FS) Research Graduate (GR) Research Show All Records

Sort by: Study ID Study Type Researcher Dept. Title Key Words Study Site or Area City County (or Parish) State Country

Study ID	Study Type	Researcher Name	Dept. or Affiliation	Study Title	Key Words	Study Location Information				
						Study Sites & Areas	City	County (or Parish)	State	Country
758	FS	Allen, Gabrielle D.	CCT	DDDAS-TMEP, A General DDAS Framework with Coast and Environment Modifications						
140	FS	Allen, Robert L.	SCE	Louisiana Geographic Information Center (LAGIC) - Year 3				LA		United States
284	FS	Allen, Robert L.	SCE	Proposal for an Interagency Agreement Between Office of LA Oil Spill Co-ordinator and LSU Regarding Validation of LAB SOP for LOSCO						
515	FS	Allen, Robert L.	SCE	Interagency Agreement between LOSCO and LSU Regarding		LSU	Baton Rouge	East Baton Rouge Parish	LA	United States
516	FS	Allen, Robert L.	SCE	Refinement and Validation of Laboratory Standard Operating Procedures						
619	FS	Allen, Robert L.	SCE	Regarding the Validation, Post-processing, and Refinement of the Laboratory Standard Operating Procedure (SOP) for the LOSCO Baseline Sampling and Analysis Project						
864	FS	Ates (Bargu), Sibel	DOCS	Public Health and Stressors				Jefferson Parish St. Bernard Parish	LA	United States
879	FS	Ates (Bargu), Sibel	DOCS	Distribution and Potential Toxicity of the Diatom <i>Pseudo-nitzschia</i> spp. in Mississippi River Influenced Louisiana Coastal Waters		Mississippi River Coastal Marshes			LA	United States
896	FS	Ates (Bargu), Sibel	DOCS	Phytoplankton Monitoring				St. Bernard Parish Jefferson Parish	LA	United States
900	FS	Ates (Bargu), Sibel	DOCS	Collaborative Research RCEP: Demolition and Trinit in the						

SC&E Research Website

LSU's School of the Coast & Environment (SC&E) Research Projects

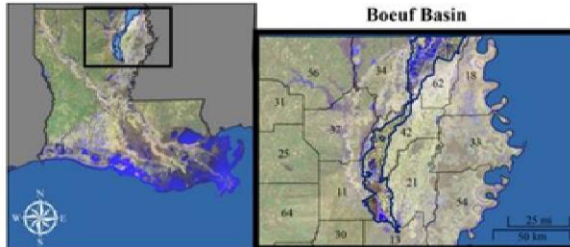
Quick Search

[Advanced Search](#)

Display Options:

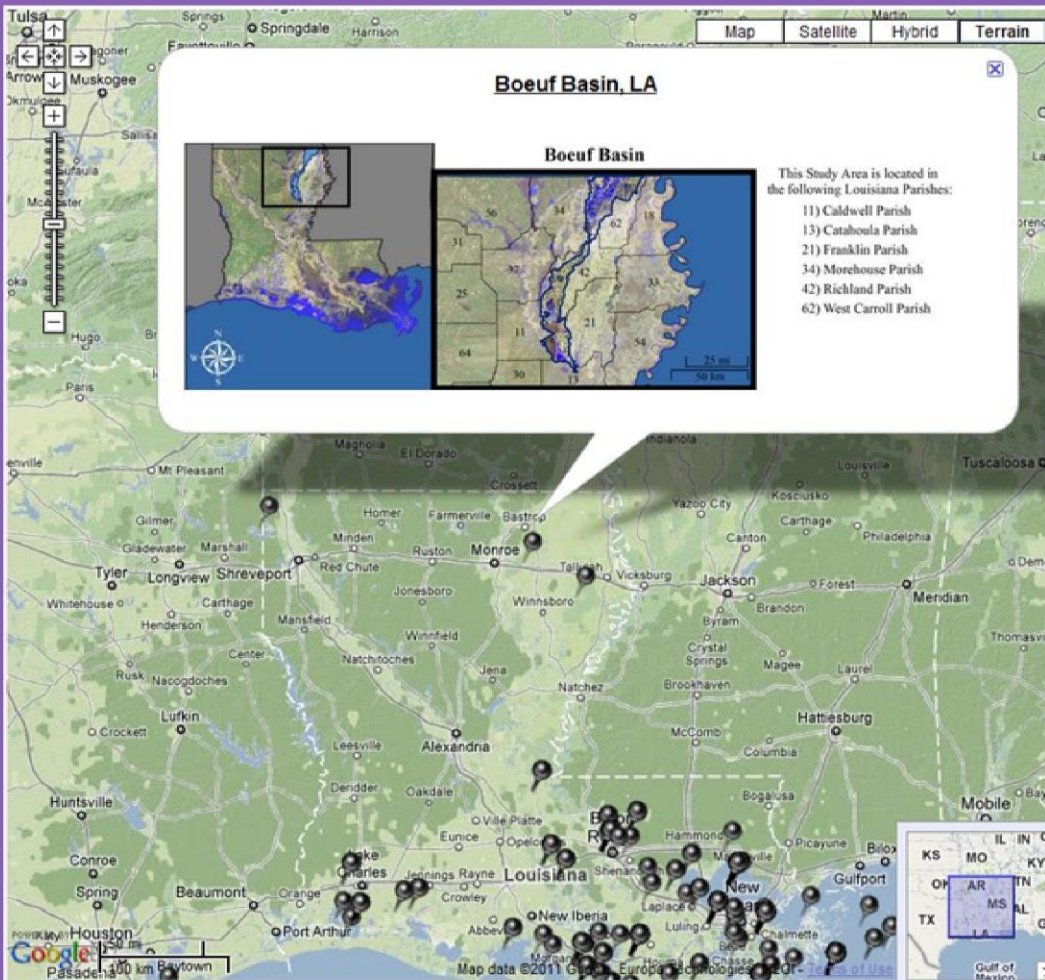
Map Satellite Hybrid Terrain

Bœuf Basin, LA



This Study Area is located in the following Louisiana Parishes:

- 11) Caldwell Parish
- 13) Catahoula Parish
- 21) Franklin Parish
- 34) Morehouse Parish
- 42) Richland Parish
- 62) West Carroll Parish



View Additional Layers

- Bathymetry
- LDWF Artificial Reef Planning Areas
- Louisiana Marsh Types
- Marine Protected Areas (MPAs)
- Minerals Management Service (MMS) Boundaries
- Oil Platforms
- U.S. National Parks
- U.S. County (or Parish) Names & Boundaries
- U.S. State Names & Borders

- Summarize by :
- Parish (for Louisiana Studies)
 - State (for US Studies)
 - Country
 - Don't Summarize

<http://www.sce.lsu.edu/research/>

Extreme Weather Story Map

Coastal Ecosystem Learning Center (CELC) Locations and Severe Weather

This site is being developed by the Aquarium of the Pacific's education department to tell the story of how Coastal Ecosystem Learning Centers (CELCs) are being impacted by Severe Weather events

Current Weather

Droughts

Wildfires

Floods

CELCs and Wildfires

Wildfires are uncontrolled fires that typically start in wilderness areas where there is dry plant material, like trees or brush. These fires can start unexpectedly and spread quickly. On this map, you can see two different sets of data:

(1) The widespread colors you see across the United States show the wildfire potential of any given area from 2012. According to these data, can you identify areas that are more prone to wildfires? Why are those

LEGEND

Coastal Ecosystem Learning Center (CELC) locations



2013 Wildfire Notes



Current US Wildfire activity

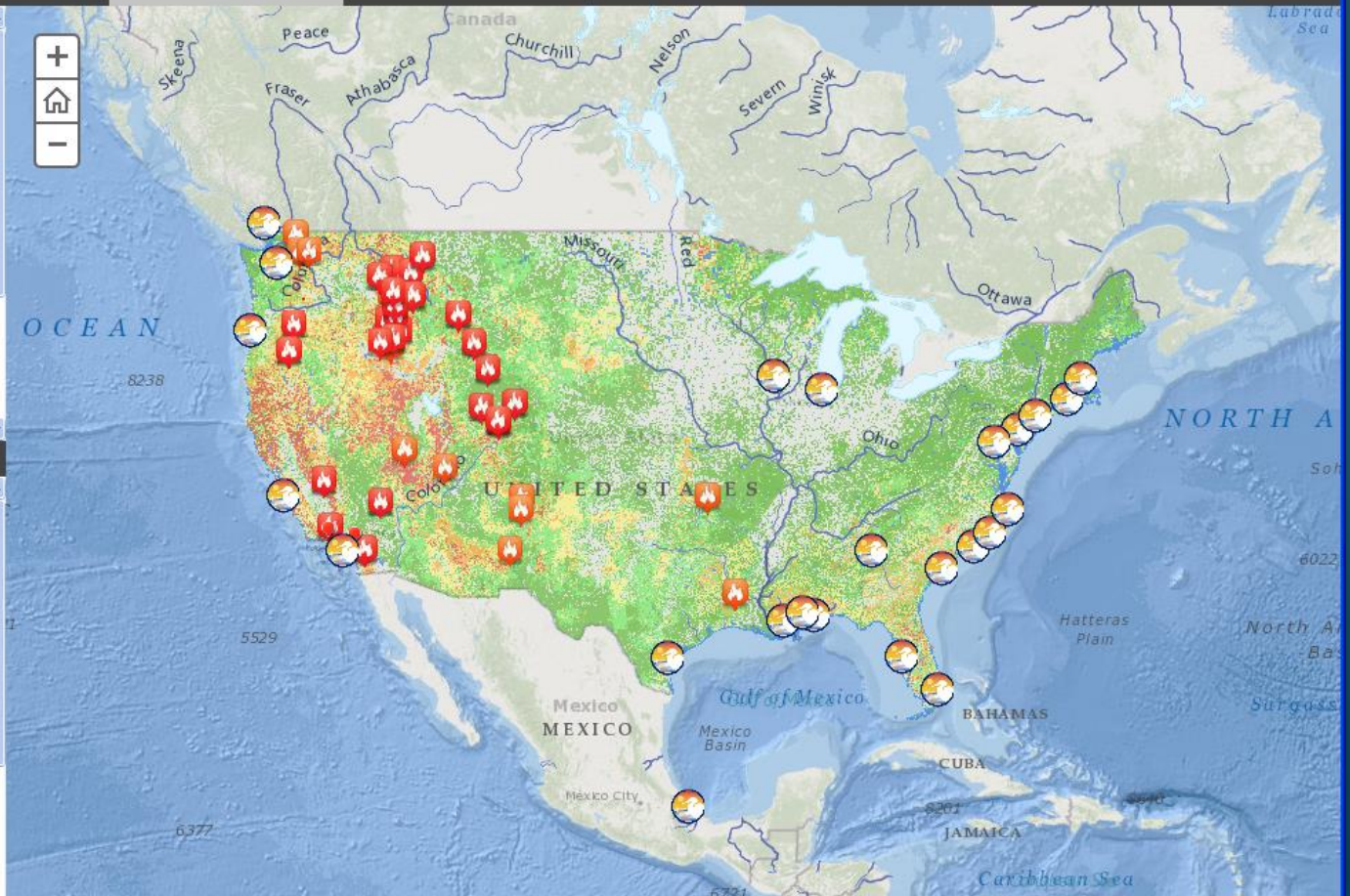
Large fire location



Active fire report



Active perimeter



<https://aop.maps.arcgis.com/>

BTI Story Map

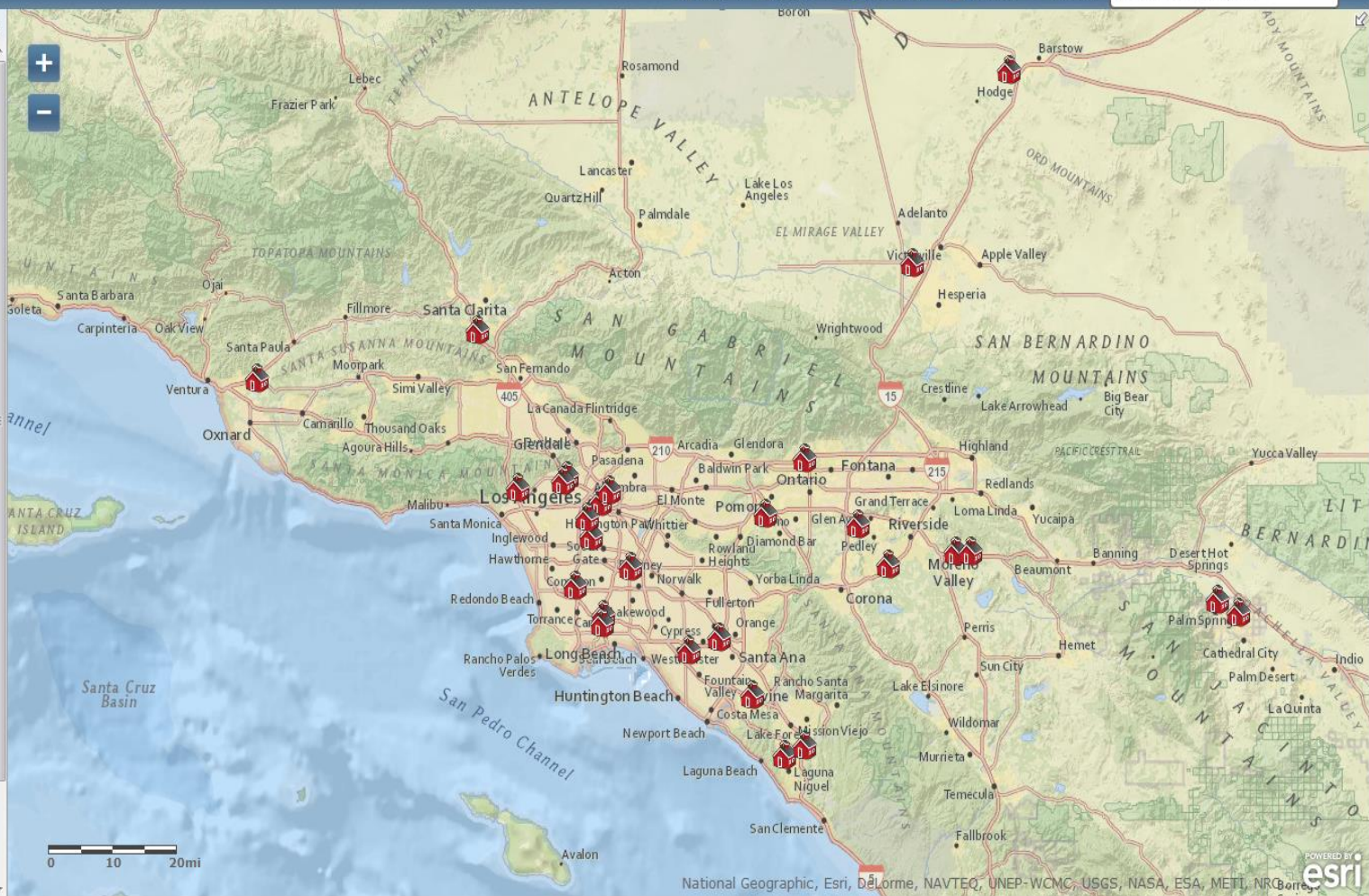
Boeing Teacher Institute (BTI) Story Map

Details Legend

Print Layers Basemap Measure Share Find address or place

The [Aquarium of the Pacific](#), through a generous grant from The Boeing Company, is proud to offer the 2013 Boeing Teacher Institute (BTI). This is an interactive map of the schools represented by the teachers attending the 2013 BTI.

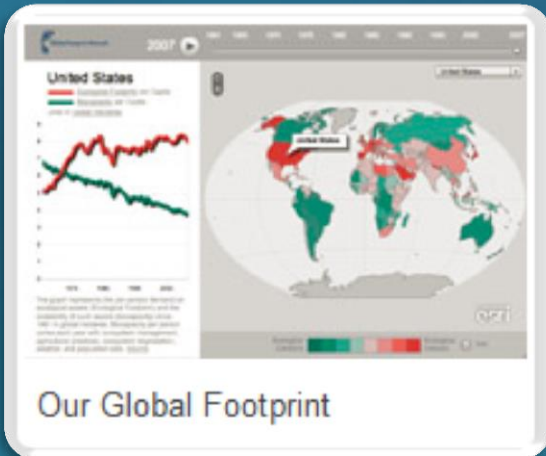
For this year's institute, the Aquarium is partnering with COSEE-West and the USC Wrigley Institute. A collaborative and creative group of 30 teachers, representing a variety of experiences, will be invited to this week long intensive introduction to the Aquarium, Southern California's diverse ecosystems, research being conducted by local scientists, and tools to bring data and current science into the classroom. The program includes a behind-the-scenes look at the Aquarium of the Pacific, three days on Catalina Island, and continuing involvement in an on-line professional development community.



<https://aop.maps.arcgis.com/>

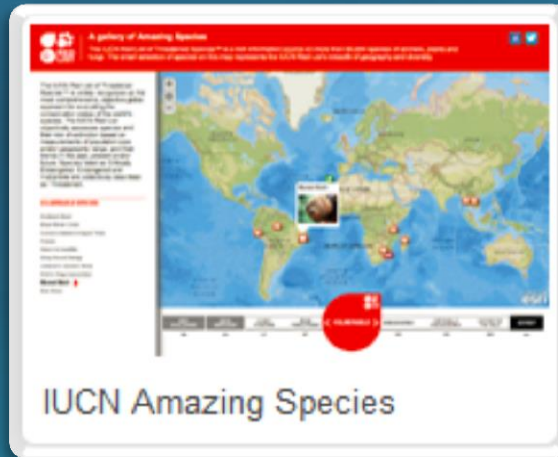
Story Maps

These Story Maps & Others can be found at: <http://storymaps.esri.com/>



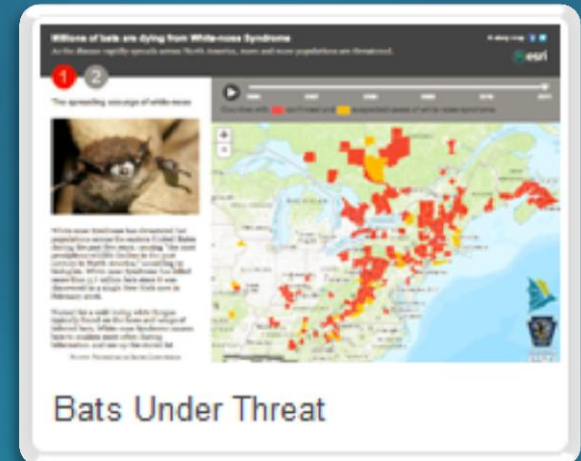
This story map, titled "United States", features a line graph on the left showing two data series over time (1950-2000). The right side displays a world map with colored overlays representing the United States' global footprint. The ESRI logo is visible in the bottom right corner.

Our Global Footprint



This story map, titled "A gallery of Amazing Species", includes a text panel on the left and a world map on the right. The map shows various species distribution points across the globe. A red circular callout is present on the map. The ESRI logo is in the bottom right corner.

IUCN Amazing Species



This story map, titled "Millions of bats are dying from White-nose Syndrome", features a photo of a bat on the left and a map of North America on the right. The map shows the spread of White-nose Syndrome with red and yellow markers. The ESRI logo is in the bottom right corner.

Bats Under Threat



This story map, titled "One World, Many Voices: Endangered Languages and Cultural Heritage", includes a photo of a person on the left and a world map on the right. The map highlights areas where languages are endangered. The ESRI logo is in the bottom right corner.

One World, Many Voices: ...



This story map, titled "A History of Royal Births", features a large photo of a royal couple in formal attire. The ESRI logo is in the bottom right corner.

A History of Royal Births



This story map, titled "A guided tour of Olympic host cities", includes a map of Australia on the left and a photo of Olympic athletes on the right. The ESRI logo is in the bottom right corner.

Olympic Host Cities

Story Map Tutorial

BTI Story Map Tutorial and links FREE GIS Lesson Plans for K-12 Classrooms

available online at:

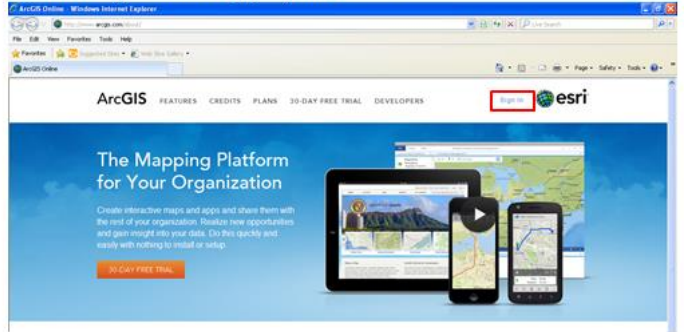
http://JenniferALentz.info/Teaching/Tutorials/CreatingStoryMapsOnline_2013.pdf

This PowerPoint Presentation, as well as other presentations, are also available online at:

<http://JenniferALentz.info/Teaching/>

How to make an ESRI Storytelling Interactive webmap

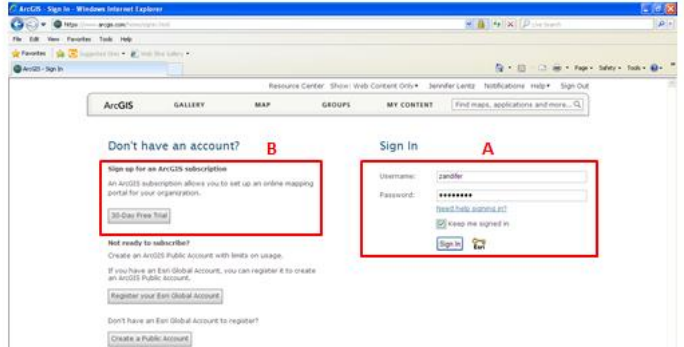
- 1) Go to the following website: <http://www.arcgis.com/> and click the "Sign in" link in the upper right hand corner



- A) Log in with your personal OR organization's ArcGIS online (AGOL) account
For example here I have logged in with my personal AGOL account log-in

OR

- B) register for a free 30 day trial



July 2013 created by Jennifer Lentz, Ph.D. (aka Dr. Jenny) Page 1 of 13

