A child wearing a grey cap and an orange t-shirt is seen from behind, pointing their right hand towards a world map. The map is rendered in white and light blue, set against a bright blue sky with wispy white clouds. The child is positioned in the lower right corner of the frame.

Using Geospatial Technologies to Engage the Public in Ocean Science

Jennifer Anne Lentz, Ph.D.

Education Specialist at the Aquarium of the Pacific

Esri Ocean GIS Forum Lightning Talk Presentation

Wednesday, November 5th, 2014

Geospatial Technologies



Geospatial Technologies



Geospatial Technologies

Ocean Science Center



Science on a Sphere (SOS)

Interactive Web Apps

Sea Level Rise App

AQUARIUM OF THE PACIFIC
Sea Level Rise

Infrastructures at Risk

- Healthcare Facilities
- Schools
- Police Stations
- Fire Stations
- Wastewater Treatment Plants
- EPA Regulated Site

Population

- Vulnerable Population

Hazard Zones

- Potential Flood Zones
- Erosion
- Wetland Frontier
- CA Coastal Zone

You are looking at potential flood zones along the coast of California. According to the Pacific Institute of California, these areas are at risk of flooding if an extreme storm were to hit the coast. The area in blue is the area at risk today. The area in pink is the area at risk if sea level rises 5 feet or more. Zoom out to view the flood zones for the entire California.

[More Info](#)

<http://www.aquariumofpacific.org/webapps/slr/>

Watersheds App

AQUARIUM OF THE PACIFIC
our watersheds

entrance →
Pathway to the Pacific

Watersheds of San Pedro Bay

San Gabriel River Watershed
Los Angeles River Watershed
Dominguez Channel Watershed

San Pedro Bay
Pacific Ocean

A watershed is an area of land where all the surface water drains to the same lower destination, such as San Pedro Bay. This water can come from high in the mountains or from rain that falls on the streets.

Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. No matter where you are, you are in a watershed. And what you do in your watershed impacts the ocean and the animals that call it home. Get to know your watershed - go on a hike.

http://www.aquariumofpacific.org/ourwatersheds_site/

Whale Research App

AQUARIUM OF THE PACIFIC
Southern California Whale Research Project
Connecting People, Science, and Whales

HIDE TOOLS
SHIPPING LANE SURVEY AREA
ADD UP TO 4 LAYERS

Blue Whale

<http://whaleproject.aquariumofpacific.org/>

Whales: Voices in the Sea

VOICES IN THE SEA

Home Species Exhibit Videos Education Games Blog

Click a *Marine Mammal* to Explore Voices in the Sea

California Blue Whale Update

Learn how photographs are used to identify individual whales, allowing scientists to track their populations. Watch: California Blue Whale Update

CHANGING ARCTIC WILDLIFE CA BLUE WHALE GRAY WHALE

Administrators | Site Map
Voices in the Sea Copyright © 2007-2011

PACIFIC LIFE FOUNDATION
SCIENCE SOCIETY OF OCEANOGRAPHY

Please address any comments or questions to the Information

http://cetus.ucsd.edu/voicesinthesea_org/index.html



Story Maps and other GIS-related projects



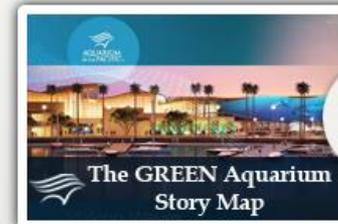
AOP's CELC Story Map



AOP's Magellanic Penguins Story Map



AOP's Visions '13 Cruise Story Map



AOP, The GREEN Aquarium

The Aquarium of the Pacific's mission is to instill a sense of wonder, respect, and stewardship for the Pacific Ocean, its inhabitants, and ecosystems. Our vision is to create an aquarium dedicated to conserving and providing Natural Capital (Nature and Nature's services) by building Social Capital (the relationships and trust among people).

The Aquarium of the Pacific (AOP) is the fourth most-attended aquarium in the nation. It displays over 12,000 animals in more than 50 exhibits that represent the diversity of the Pacific Ocean. Each year more than 1.5 million people visit the Aquarium. Beyond its world-class animal exhibits, the Aquarium offers educational programs for people of all ages from hands-on activities to lectures by leading scientists. Through these programs and a variety of multimedia experiences, the Aquarium provides opportunities to delve deeper into ocean science and learn more about our planet. The Aquarium of the Pacific is the most significant and vibrant gathering place where diverse cultures and the arts are celebrated and great, important topics facing our world are explored by scientists, policy-makers and stakeholders in the search for sustainable solutions.

ArcGIS Online & Story Maps

Using Story Maps to help guests learn more about our...

Animals



Exhibits



Experiences



Locations



Issues



Interpreting with Story Maps



Interpreting with Story Maps



Story Maps Interpreter Survey

We're exploring how to make the best use of the Story Maps Dr. Jenny's been working on. This survey will help us get an idea of how they can be used on the floor by our interpreter staff. Including how the existing story maps are received by guests, how staff feel about interpreting with them, technical problems that may need to be addressed, ideas for improvement, new story maps ideas, etc.

Please take a few minutes to fill out this survey after each time you interpret using our iPads to connect to our Story Maps out on the floor (after each interp session, not after each guest interaction).

Thank you so much for your help!!!

~Dr. J

* Required

Part 1: Background Info

1) What's your name? (optional)

Name of the AOP Staff Member or Volunteer interpreting with Story Maps

2) Do you have prior experience interpreting with AOP Story Maps? *

- No, this was my first time (skip Part 2 & go straight to Part 3)
- Yes, I've used the iPads to interp with story maps before

Continue »

25% completed

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Basic information

- Which story map did you use?
- Where did you use it?
- How was the internet connection?
- How was the lighting?

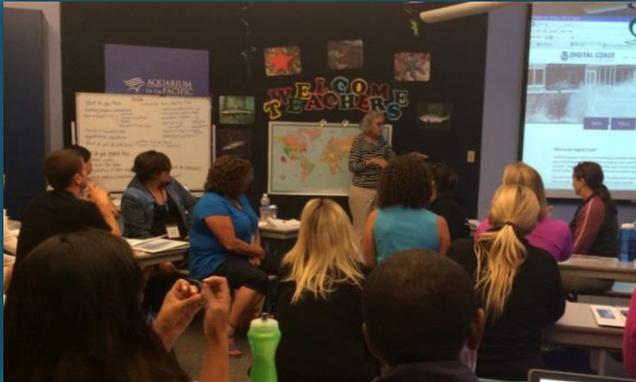
Assessing Staff's Personal Experience

- How did you feel about interpreting with these?
- Would you use them in the future?
- How would you prefer to interpret with these (iPads, kiosks, etc.)
- Edits, additions, you'd recommend making to existing apps?
- Ideas for future story maps?

Assessing Guest Experience

- How many guests did you interact with?
- Were they individuals, families, etc.
- Overall level of guest engagement
 - High (very engaged & interested)
 - Medium (moderately engaged & somewhat interested)
 - Low (not engaged & not interested)
- Overall level of guest perception (Positive, Neutral, or Negative)
- Did guests find the interactives helpful?
- Were they interested in exploring the apps online?

Introducing GIS to Teachers



Alie LeBeau Clarke
August 21, 2013 · Long Beach, CA

We talked about data and storymapping and GIS with Jennifer Lentz, so I thought you might enjoy this map of favorite field trip destinations. p.s. the AOP is missing. How is that possible? Anybody want to submit their glowing recommendation?

Get Going: Mapping Teachers' Favorite Field Trip Spots
Teachers! Need ideas on where to take your students for beyond-school learning? See our interactive map of the best field trip spots across the U.S. Have a favorite field trip location? Submit your favorite venue and help us build a rich and dynamic...

EDWEEK.ORG

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION 1 Jenny

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Aquarium of the Pacific Featured Content

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Search the website or visit the [ArcGIS Marketplace](#)

AQUARIUM OF THE PACIFIC
A non-profit institution

Creating an Interactive Web Map using ArcGIS ... (0) ★★★★★

PDF

Step by Step tutorial designed to teach people how to use ArcGIS Online to create an interactive web map

OPEN DETAILS

Creating Map Tour Story Maps using the Snap2... (0) ★★★★★

PDF

How to create a Map Tour Story Map quickly and easily using your smartphone or tablet, and your ArcGIS Online Organization Account and the Snap2Map app

OPEN DETAILS

GIS Resources for Educators (0) ★★★★★

PDF

This document provides K-12 educators with the resources needed to get going in GIS, including links to GIS education sites and a copy of the ESRI form needed to get an ArcGIS Online AGOL organization account for their school

OPEN DETAILS

GIS Wildlife Data Tutorial: AGOL with OBIS and I... (0) ★★★★★

PDF

tep by Step tutorial designed to teach people how to use ArcGIS Online (AGOL) to create an interactive web map with wildlife data from OBIS and the ICUN Red List

OPEN DETAILS

GIS & Story Map Tutorials

GIS Wildlife Data Tutorial

How to find, Map, & Spatially Analyze Wildlife Data in a GIS System

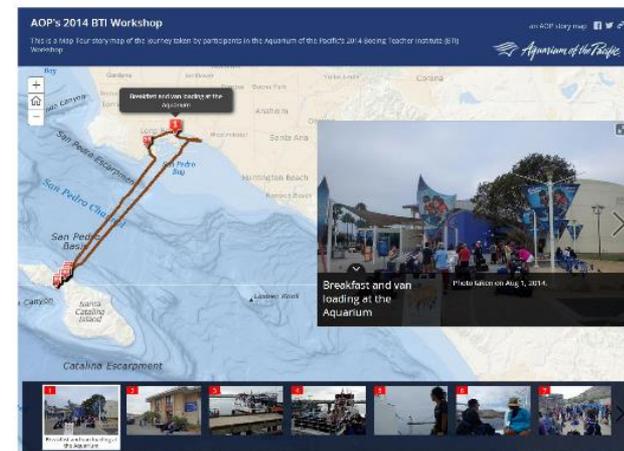


This Tutorial was Created by
Jennifer Anne Lentz, Ph.D.
Education Specialist at the Aquarium of the Pacific

*This tutorial, and other teaching-related materials by Dr. Lentz are available online at:
<http://JenniferALentz.info/Teaching.html>*

Creating “Map Tour” Story Maps

How to create a Map Tour Story Map quickly and easily using your smartphone or tablet, and your ArcGIS Online Organization Account



This Tutorial was Created by
Jennifer Anne Lentz, Ph.D.
Education Specialist at the Aquarium of the Pacific

*This tutorial, and other teaching-related materials by Dr. Lentz are available online at:
<http://JenniferALentz.info/Teaching.html>*

Key Story Map Questions

- **How are people using our story maps?**
 - Are teachers using existing story maps to supplement information into lessons?
or are they using the tutorials to create new story maps with their students?
 - Are guests using the story maps to learn more about our exhibits?
 - Are our staff & volunteers using the story maps as an interpretive tool?

- **How will we know **Success** when we see it?**

- **What is the *goal* of our story maps?**

- **Who is the *audience*?**

- **Are there different goals for different audiences?**

- **How do we get them *to* their intended audience?**